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**TREES  
SHRUBS  
AND  
PLANTS**

**DAVIS COUNTY  
NURSERIES  
HARNESS, DIX  
AND CO.  
ROY, UTAH**



INDEXED





# DESCRIPTIVE CATALOGUE

.... OF ....

DECIDUOUS FRUIT TREES  
GRAPES, SMALL FRUITS  
SHADE AND ORNAMENTAL  
TREES, SHRUBS, ROSES

TOGETHER WITH

BRIEF PLANTING, CULTURAL  
AND PRUNING DIRECTIONS



ISSUED BY THE

DAVIS COUNTY NURSERIES  
HARNESS, DIX & CO.  
PROPRIETORS

ROY, UTAH, U.S.A.



BUDDING GANG in The FIELD



# FACTS ABOUT OUR BUSINESS

WHY WE PRODUCE HIGH QUALITY FRUIT TREES.

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We take pleasure in presenting this edition of our Descriptive Catalogue to the public. It has been our endeavor, in issuing this book, to make it concise, accurate and attractive; and while we have not gone extensively into the minor varieties, we have endeavored to fully describe everything of value to the planters of the intermountain and coast states.

## OUR NURSERIES AND LOCATION.

Our nurseries are located at Roy, Weber County, Utah, in the beautiful and fertile valley of the Great Salt Lake, seven miles south of Ogden, and consist of some 500 acres of the richest and best land of this noted district.

Packing and storage house, 175x80 feet, built of brick with 16-inch walls, composition roof, frostproof and up-to-date, private railroad spur along side, full length of building.

After our trees are dug and put into this splendid building, for grading and storing away, they are never again submitted to changing temperatures, sun or wind until placed in the hands of the planter.

## SHIPPING FACILITIES.

Our shipping facilities are perfect. The D. & R. G. railroad runs through our place, connecting with the Western Pacific and all Colorado, New Mexico and Arizona towns, together with quick and safe transportation to all Eastern points. The Oregon Short Line railroad, but one-half mile away, connects at Ogden with the Union Pacific, Southern Pacific, Oregon Railway & Navigation Company and the Salt Lake & Los Angeles, furnishing speedy transportation to all points in Idaho, Oregon, California, Wyoming, Nevada and the East.

Our packing house is in charge of men with many years' experience, and purchasers can rest assured their orders will be packed for shipment in the best possible manner. Should there be instances where deliveries are not satisfactory, we shall be glad to be advised immediately upon receipt of stock, so we can at once make good.

## IRRIGATED TREES.

All of our trees are grown by irrigation. The question is often asked, is this any advantage. We will state our case and let you be the judge. Will a calf, a pig or a colt grow more steady and thrifty, if fed and watered regularly as its perfect development requires? Your answer is quick and sure, YES. Then why not the young tree, shrub or rose, receiving the same sort of treatment?

If the planting of the young stock is followed by a spell of dry weather, as is often the case in non-irrigated districts, it will not start to growing promptly and will receive a serious setback; if the planting is made in favorable growing weather, stock starts and then overtaken with dry weather, it is checked in growth and, to some extent, must be stunted just as in the case of a poorly or irregularly fed pig.

Again, in non-irrigated districts, the nurseryman is often delayed in starting with his budding, because the seedlings are dry and sap sluggish, and if he buds under these conditions he takes a large risk in getting the buds to set, and if he succeeds at all, many of them are apt to be very weak.

The most favorable conditions are obtained by irrigation for planting and budding. When the season for planting with us arrives, we proceed, without reference to weather conditions. If the soil appears a little dry, at time of planting, we turn on the water and start the young stock to growing. When the time for budding

comes on, we go at it, for our seedlings are ready regardless of weather; they have been kept growing by irrigation, are full of sap and in prime condition for the bud. Should unfavorable weather follow our budding, we set a small stream running on each row after the budders and there is never any check to the flow of sap necessary to the setting of buds. These conditions are maintained throughout the entire growing season, trees never dry, never soaked, never stunted. When the season for pushing growth is ended, we shut down our gates and allow them to ripen for digging.

In conclusion, we believe it is a fair statement, that it rarely happens, in non-irrigated districts, that nursery stock can be grown to maturity without suffering from drouth and excessive moisture. If from drouth it must necessarily be stunted, from which it takes a long time to recover, if at all; if from excessive rain, will overgrow or not grow at all and foliage turns yellow, either of which is as detrimental to the stock as a drouth.

#### **TRANSPLANTING IRRIGATED TREES.**

The transplanting of IRRIGATED trees will be more fully described hereafter under the caption of "When to Plant and How." But we cannot impress upon the mind of the orchard planter too strongly the importance of running a light stream of water into the holes before they are entirely filled up. If it is possible, it is better to follow closely after the planter; if not, then just as soon as circumstances will permit. This process will settle the soil firmly about the roots, much better than can be done in any other way, and absolutely prevents drying of the small rootlets, which are the feeders and life of the tree. Trees planted in this way should not be attended with one per cent loss.

It can no longer be denied that an irrigated nursery tree is the tree to plant in irrigated districts. First, because experience has demonstrated it in Colorado, Arizona, New Mexico, Utah, Idaho, Montana and California, in fact, in all the sections where irrigation is practiced. Second, because conditions are not changed in transplanting an irrigated tree from the nursery row to the irrigated orchard row, therefore the tree receives no shock from this transplanting to its new home, while the tree grown by an entirely different process and transplanted into wholly different conditions from those under which it has been grown, must of necessity undergo a period of readjustment and acclimation.

The thoroughbred horse taken from his Southern or Eastern home to the mountains and high altitude, requires from one to two years for readjustment and acclimation, and often never becomes adjusted to his new home and dies or becomes worthless.

It is true that many of our most valued varieties of fruits and plants originally came from the trackless wastes of the Himalayas and the deserts of Arabia, but it has taken years and years and fortunes of money to acclimate them and bring them to their present stage of perfection.

It is true that Mr. George C. Roeding of Fresno, California, has succeeded in reproducing the genuine Smyrna Fig. But it has cost him years of time and a small fortune, for which he deserves great credit and is justly famed "The Poo-bah Nurseryman of America."

But the man who is planting orchards for commercial purposes has but one life and limited amount of capital to invest, therefore he is looking for quick and sure results and does not want to spend this one life and this one capital in years of experimentation.

Therefore he wants the very best obtainable tree, strong, thrifty, well rooted, one that has never been stunted in the course of production and never damaged by improper handling.

WE HAVE THEM—WE GROW THEM.

## **DAVIS COUNTY NURSERIES**

HARNESS, DIX & CO.  
PROPRIETORS.

 ————— ROY, UTAH

## TREES WITH A PROLIFIC AND ROBUST ROOT DEVELOPMENT

In growing nursery stock, the Davis County Nurseries lease from the adjoining farms, fields of alfalfa which have been in alfalfa for several years. These are carefully plowed so as to cut off the crowns and kill the plants, but leave the roots. The alfalfa roots, decaying, penetrate the soil deeply and in all directions.

On this ground the seedling roots are set out, after budding or grafting. **Alfalfa soil stimulates root growth.** The little tree, with channels of fertility left running through the soil in all directions by the alfalfa roots, sends out a profuse growth of both large and small roots, downward and outward, in all directions.

The roots are the **source of all growth** in fruit trees. Young trees with many, well grown, vigorous roots take a stronger, quicker hold when transplanted, and make larger, stronger, better trees.

### GROWING GOOD TOPS.

The **strength** of a young tree is in its root system. The **character** is in the top. The man who plants an apple or pear or cherry tree wants to know not only that it will be a big, strong, healthy tree, but he wants to know that it will produce **good fruit, in the right variety.**

The Davis County Nurseries are located midway among the finest orchards, kept by the most skilful orchardists in the world. To the east are the magnificent orchards of the valleys of the western slope of Colorado, the orchards of the fruit valleys of Utah. To the north and west are the celebrated orchards of Idaho, Montana, Washington and Oregon. In all these districts the Davis County Nurseries keep resident and traveling agents; part of the year these agents are selling stock; part of the year they are looking to deliveries of trees, and going over the young orchards, giving the planters free advice, for the Davis County Nurseries are interested in every tree they sell.

In the right season of the year, these agents **cut scions.**

In all these districts they look out for the **best trees.** If a Jonathan tree is well shaped, matured early, is very thrifty, produces good crops of fruit; the fruit is of extra good quality—then scions or cuttings from that tree are bought from the owner, carefully cut, packed and shipped to the Nurseries, where they are grafted or budded upon the seedling stock.

So, while the roots are making their strong growth, **tops** are also growing, strong and vigorous and healthy, which will perpetuate the exact characteristics of the tree from which the scions were cut. This method is followed by the Davis County Nurseries for all standard varieties of **Apples, Pears, Cherries, Peaches, etc.**

If you buy a young tree of the Davis County Nurseries, you may be sure that when that tree bears fruit it will not only be **true to name**, but that it will be true to the **highest standard of that name.**

### MONEY IN FRUIT GROWING.

For the last ten years the prediction has been current of "overproduction" in fruit. In the last five years, a larger area of new orchards have been coming into bearing, and the prices of **really good fruit** are as high or higher than ever.

It is hard to overproduce the **highest grades** in anything. It is very easy to glut the market with inferior products. There never was a brighter outlook than today for **good prices and ready markets** for the **best apples, pears, peaches and other fruits, all that can be produced for years to come.**

To produce the **highest grade** of any fruit, the **very best** must be provided all along the road—the best soil, the best climate, the best **varieties**; the best **grown trees**; the best care and attention to the growing young trees; the best care and attention to the producing orchard; and the most rigorous care in the picking, sorting, packing, labeling and shipping of the fruit.



An Orchard of Stayman's Winesap Apples Showing Growth of Our Trees.

To attain this, the Davis County Nurseries try to provide the fruit-grower with the **very best trees of the very best varieties**. That is our part. We have tried to do it well. We try to do it better every year. If the grower who buys and plants our stock will give all the other details of fruit production the painstaking care we have given to provide the **best possible trees of the best varieties**, his success will be very great and very certain.

When we have secured an order for trees, packed and shipped them and collected the price, we are not done with those trees. Our success depends upon the success of the trees we sell. We **know** the trees are **good** when we deliver them, and after they are sold we continue to give the grower the best advice, counsel and help we can. Our oldest customers are our warmest friends.

**PLANTING GOOD TREES.**

The ambition of the Davis County Nurseries has been and is simply to grow the **best trees that can possibly be grown.**



A Davis County Nurseries Exhibit at the Utah State Fair.

There is no such thing as taking too much trouble and pains in producing and growing orchard trees. To put it in dollars and cents: suppose one grower procures the very best stock, plants it under the best conditions, cares for and nurtures his young trees during all the period of their growth; and suppose his neighbor buys cheap stock, plants it carelessly, gives it indifferent care. At eight years the **good tree, well tended**, will produce easily twice as much fruit as the poor tree, badly tended; and this crop will contain twice as much fruit of the highest quality.

The cash value of the annual product of the well-tended tree will be from three to four times the value of the annual product of the poorly tended tree.

The good tree may cost 25 cents, the poor tree 10 cents. The good tree may have had, in the eight years of its life, a total of \$5.00 worth of care and attention. The poor tree may have had \$2.00 worth. Assuming the same value for the land occupied you get these figures:

	GOOD Tree, WELL Planted.	CHEAP Tree, BADLY Tended.
Cost Tree .....	\$0.25	\$0.10
Cost Care .....	5.00	2.00
<hr/>		
Total.....	\$5.25	\$2.10
Annual Crop Value .....	8.00	2.00

These figures are not fanciful. It is the plain truth that the first year's crop pays back, abundantly, the whole difference in the cost, and every year afterward increases the margin of profit.

#### CHOOSING VARIETIES TO PLANT.

In planting a few trees for a family orchard, the only rule to follow is to plant the kind of trees **you** like, providing they are varieties that do well in your locality.

In planting trees for a commercial orchard, the only rule to follow is to plant the kind of tree that produces the fruit which **sells best** and brings in the most money.

Through its agents, who are always trained and experienced fruit tree men, and who are continually in touch with the best and most skilful orchardists in the best orchard regions of the country, the Davis County Nurseries are in position to give their patrons the best and most disinterested advice as to what kinds of trees to plant, both in adaptation to their vicinity, and to their best markets.

**Bonanza profits** in the nursery business are often made by offering new varieties (or old varieties under a new name) of the various fruits, as being great improvements over the old and tried varieties. The Davis County Nurseries can provide their patrons with good stock of all the known varieties and most of the new and spectacularly advertised kinds. In the long run, however, the greater profits are made by the growers who can market the older, well known, standard varieties. Jonathan, Winesap, Rome Beauty, Gano, and similar apples; Bartlett, Anjou, Howell and similar pears; Elberta, Crawfords, Triumph, Carman and similar peaches, have been grown and closely observed by expert fruit growers for from twenty-five years to more than a century; their characteristics, period of blooming, defects and their remedies; special diseases, etc., etc., are all well known. **The markets are familiar with the old varieties.** In the long run they sell more readily and average higher prices.

#### ADVANTAGES OF DORMANT TREES.

At the altitude and latitude of Roy, Utah, there are always sharp frosts early in the fall, which make the young trees ripen up their wood, and drop their leaves. Cold nights come in due season, and by mid-November our young trees are always thoroughly dormant. The sap is all out of the trunk and limbs; the roots have ceased their activity. At this stage we dig the trees, and put them away in freeze-proof warehouses for the winter.

A great many of the fruit trees offered on the general market are grown in semi-tropical locations. With the long summer seasons, absence of frosts in the fall; warm rains instead of snows in winter; frequent warm spells in midwinter, warm-climate grown trees **never do grow entirely dormant.**

A little tree is like a little child. A baby entirely asleep can be moved from one bed to another, and when the time comes to wake, it wakes bright and well. A half-asleep, fretful child will waken instantly when moved, and not go back to sleep.

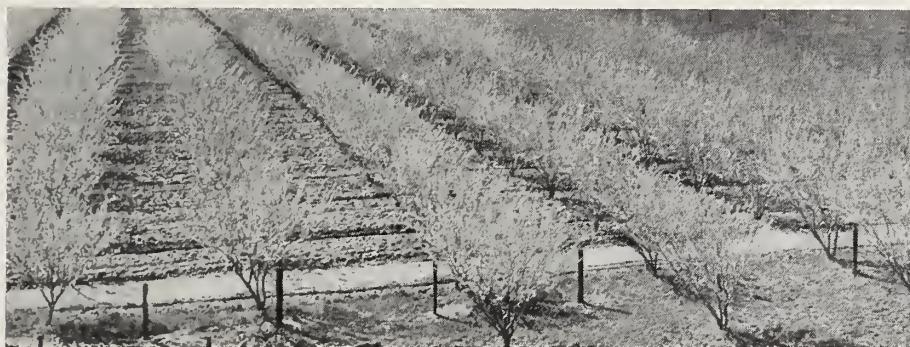
In northern climates, where late frosts follow the planting seasons, our trees, planted entirely dormant, will not start their leaves until freeze dangers are past. In southern climates we can deliver trees for planting, entirely dormant, long after local stock is out in full leaf, and cannot be planted without great injury.

So important is this point considered that we are selling tens of thousands of apple and pear trees in Southern California every year, in spite of the fact that some of the largest nurseries in the country are in California.

#### PERFECTLY HEALTHY STOCK.

The conditions under which we work, and the methods we use make it possible for us to assure every buyer that the stock he gets from us is **absolutely clean and free from disease**.

There is an enormous difference between the arid or desert region and the regions of the Middle West and South where vegetation depends upon rainfall.



A Well Spaced Utah Peach Orchard Planted to Our Trees.

In the first place, in the East fruit trees of all kinds have been grown for the last 60 to 100 years. The science of fruit tree sanitation is only about 25 years old. Before that period hundreds of orchards were planted, neglected, allowed to harbor all kinds of insect pests; allowed to become the home of scabs and other fungus diseases, blights, root-knots, crown-galls and the like. The woods and hedge-rows of the eastern country are full of wild fruits closely related to the domestic fruits, and these—the wild apples, wild raspberries, wild currants, nut trees, wild cherries, wild plums, rose bushes, etc.—are all infested with these pests and diseases.

Young nursery stock, grown under these conditions, cannot escape getting its share of infections, and when planted in the young orchards these infected trees not only do not grow well, but infect others.

The Davis County Nurseries stock is grown on **derest** ground. Above the irrigation canals there is but little, or no, tree growth in which a fruit-tree disease or pest could find lodgment. The result is that we are bothered but little by fruit-tree pests and diseases. In a desert climate such as we have in Utah, a good many of the fungus diseases, scabs, etc., do not exist. The air is too dry and there is too much sunshine.

In addition to these natural precautions, every consignment of trees, vines or shrubs is **fumigated with cyanide gas** before leaving our warehouse. This absolutely exterminates all insects, nits, eggs, worms, cocoons or other forms of life.

## IMPORTANT THINGS TO OBSERVE

1. All orders should be plainly written on a separate sheet of paper and not mixed up in the body of the letter. This prevents confusion in booking orders.

2. Our packing and labeling are as perfect as possible, and we charge for the same only to cover the cost of material. All goods are delivered at the railway or express office free of charge.

3. State distinctly how you wish us to ship—by freight or express; also designate the route, otherwise we use our own discretion in forwarding.

4. After delivering to the carriers we cannot hold ourselves responsible for any loss or injury to trees or plants after they have been carefully packed and shipped; but we will do everything in our power if any loss should occur, for the protection and recovery of our customers' property.

5. If any mistakes are made in filling orders, we will cheerfully rectify the same, but must respectfully request our customers to notify us at once; or, at the most within ten days after receipt of the goods.

6. Orders from unknown correspondents must be accompanied by a remittance or satisfactory reference.

7. We uniformly tie our trees in bundles of 10, and grape vines in bundles of 50; and we suggest to our patrons to make their orders for assortments as far as possible in multiples of these numbers.

8. Articles mentioned in the following list will be furnished at prices named as follows: 50 at the 100 rate; 500 or more at the 1000 rate. Less than 50 of a variety at the single rate. This does not mean, as an illustration, that 10 pears, 10 apples, 10 plums, 10 nectarines would be charged at the 100 rate. To secure this rate it will be necessary to order 50 trees of one sort.

### GUARANTEE OF GENUINENESS.

In growing and furnishing all nursery stock, every care and precaution is exercised to have it true to name; still with all our care, mistakes are liable to be made, but we hold ourselves in readiness, on proper proof, to replace all stock that may prove untrue to label, free of charge, or to refund the amount paid. This statement is due notice to purchasers of nursery stock of the extent of our liability after the same has been accepted by the buyer.

### IMPORTANT.

Please remember to write your name, postoffice, county and state as distinctly as possible; also give your nearest express office and railway station, or, if on a stage route, send us special directions, giving us the name of the transportation company delivering the goods.

### REPLACING.

We do not replace any trees, unless it can be clearly shown that the loss is due to our neglect or bad condition of trees when delivered to the railroad or the customer, as the case may be. No salesman, agent or representative of ours has the privilege or right to promise a replace or agree to give one.

### CAUTION.

We accept all orders upon condition that they shall be void, should any injury befall stock from frost, fire, hail, storms or other causes over which we have no control.

# WHEN TO PLANT AND HOW\*

Taking it for granted that the intending planter is reasonably familiar with local conditions prevailing in his locality and on his land, a few suggestions on methods of planting will be found timely. Obviously it is of the utmost importance that the land be put in first-class condition to receive the trees. This is accomplished by thorough plowing followed by harrowing until the soil is friable as an ash heap. Nothing is so beneficial to soil as sub-soiling, though planters are often deterred from incurring this additional expense, but where time and conditions will permit, it will do more to promote a fine deep root system and an unusually heavy growth, than any other one thing that can be done in the preparation of the soil. Drainage should be given consideration, particularly if the land is low and liable to have water stand too closely to the surface during the spring and summer months.

## TIME TO PLANT.

Early spring planting is always advisable. We do not recommend fall planting, for the reason that nursery stock cannot be properly matured for digging in time to get it to the planter before freezing weather.

## SELECTING NURSERY STOCK.

This is not over difficult if the planter is reasonably familiar with the character of the land which he is to devote to fruit culture, together with its climatic conditions. Where patrons are in doubt as to varieties, if they will write us of their local conditions, we shall be pleased to make a selection, subject, of course, to their approval. We aim to supply well grown, straight and healthy trees and

vines with a strong, vigorous root development, free from insect pests and disease, and invariably true to name. We do not grow "cheap" trees, because such are expensive to the planter if tendered to him as a gift, and are always a source of dissatisfaction and after recrimination between sellers and buyers. You cannot extract sunbeams from cucumbers, neither can you produce fine fruit from a stunted and badly grown nursery tree. In taking up nursery stock we exercise every precaution to avoid exposure of the roots, so as to maintain the vigor of the tree.

## NUMBER OF PLANTS ON AN ACRE

Distance apart each way	NUMBER OF PLANTS	
	Square Method	Equilateral Triangle Method
1 foot	43,560	50,300
2 "	10,890	12,575
3 "	4,840	5,889
4 "	2,722	3,143
5 "	1,742	2,011
6 "	1,200	1,397
7 "	888	1,025
8 "	680	785
9 "	537	620
10 "	435	502
12 "	302	348
14 "	222	256
15 "	193	222
16 "	170	196
18 "	134	154
20 "	109	125
25 "	69	79
30 "	48	55
35 "	35	40
40 "	27	31

RULE SQUARE METHOD—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant or hill; which, divided into the number of feet in an acre (43,560) will give the number of plants or trees to an acre.

RULE EQUILATERAL TRIANGLE METHOD—Divide the number required to the acre "square method" by the decimal .866. The result will be the number of plants required to the acre by this method.

## TREATMENT WHEN RECEIVED.

The trees when received at point of destination should be immediately unpacked and the roots laid in a trench and well covered with soil which should then be thoroughly wet down. If delayed in transit, thereby becoming dry and suffering from exposure (the bark

\*Note.—In preparing this catalogue we desire to announce that instructions for planting and pruning, and some of the descriptions of fruits, are taken from Mr. George C. Roeding's "California Horticulture," with the kind consent of the author, for all of which we desire to give due credit and return our sincere thanks.

showing signs of shriveling), it is a good plan to immerse the trees in a tank over night and the following day bury root and top completely in damp soil for a few days until they become normal, when they may with safety be planted out. Should trees be frozen while in transit, place the package in a cellar or some other place free from frost until thawed out, when they can be unpacked and heeled in, preparatory to planting. Trees treated in this manner will not be injured by having been frozen.

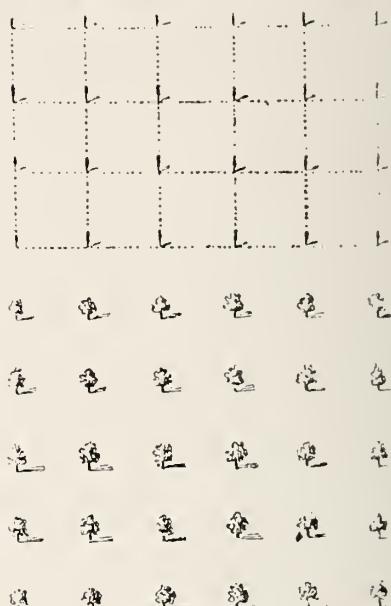
#### **PREPARING TREES FOR PLANTING.**

Just immediately before planting, be sure to examine the roots carefully, and cut away to a smooth surface all bruised, lacerated and broken roots and rootlets with a sharp knife. The tree can now be said to be ready for its permanent orchard home.

If planting is delayed through circumstances beyond the control of the orchardist and a warm spell should intervene, causing the buds of the trees or vines to start, remove them from the trenches, shake out all the dirt from the roots and expose them for three hours in the morning on a calm day to the rays of the sun. This will cause the small white rootlets which have started to dry up, and if the trees are heeled in (wetting them down, of course), in a shady place their dormancy may be prolonged several weeks. In setting out one person should hold the tree in an upright position while another shovels or fills in the loose soil around it, first spreading out the roots and rootlets in as natural a position as possible. The surface or friable soil should be put in first among the roots, care being taken to fill in every interstice, thus bringing all the roots in direct contact with the soil. When the hole is two-thirds full, firm the earth thoroughly about the roots, but before doing this draw the tree up to its permanent position. The top three to four inches of soil should not be tramped. A basin should be scooped out around the tree which will hold at least 10 gallons of water and unless heavy rains should intervene to fill it up, water should be applied either by bucket or by irrigation. The following day draw in loose soil to fill up this basin, reducing it to a fine condition of tilth and do not tramp in. Guard against setting too deeply, but allow for the settling of the soil, so that when once established the tree will stand about as it did at the time of removal from the nursery rows.

#### **HOW TO PLANT.**

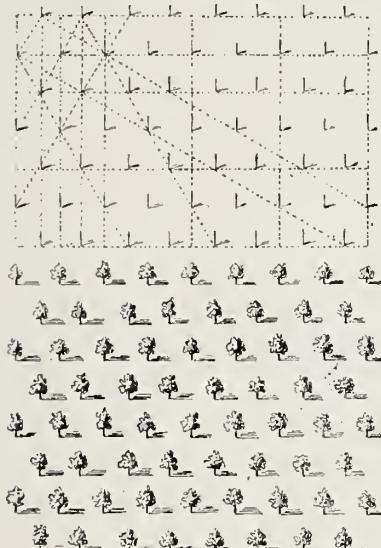
Before proceeding with the planting of an orchard or vineyard, the land should be laid off having one side and end of the field at right angles. When there are no regular subdivisions to work from, and particularly where extensive plantings are to be carried on, these base lines should be established with a transit. Nothing is more unsightly than to have your trees or vines out of line, and by following out the suggestion of having these base lines at right angles, there is very little probability of this occurring.



**Square Method.**

There are two methods of planting, the square, which is the one most universally used, and the equilateral triangle, both of which are illustrated herein. A stake about half an inch square and one foot long, split out of wood, will be found to be a very convenient size as a marker for the setting of the trees. Dip about six inches of one end in whitewash, as they can then be readily seen, and should any of the stakes be out of line it will be noticed at once. Before digging the holes it is necessary to have a tree setting board. This is easily made out of a piece of 1x4-4 foot long with an inch hole at each end and a notch in the center. Place the notched center against the stake where the tree is to be planted.

and push a stake into the ground through the holes at each end of the planter and remove the center stake. The hole may now be dug and this should not be less than 18 inches in diameter and 18 inches deep. After the hole is dug, replace the board over the end stakes in its former position, then plant the tree with the trunk resting against the center notch in the board and it will be in identically the same place as the stake which was removed to dig the hole.



Equilateral Triangular or Hexagonal Method.

#### SQUARE METHOD.

Having the corners fixed, the next step is to lay off the ground. In order to fully understand the matter, we will suppose that the trees are to be planted 24 feet apart. To set stakes for ten trees for each stretch of the wire, it will be necessary to have a wire 240 feet long with a short two-foot link at each end for a three-inch iron ring, through which the iron pegs are pushed into the ground after it is drawn taut, to hold it in place. Use a No. 10 gauge galvanized wire and at each 24-foot point have a small piece of wire wrapped around it and soldered into place. Before proceeding with the laying out of the ground, set stakes along the outside line, start at the same end of the field again and set another line of stakes, parallel with the first line and the length of the chain distant from it. Follow out this method

until the entire field is laid out in checks. With the check lines established, it is only necessary now to set stakes at the 24-foot marks on the wire where the trees are to be planted.

#### EQUILATERAL TRIANGULAR OR HEXAGONAL METHOD.

By this method of planting all the trees are equally distant from each other and the ground is equally divided in all directions. The arrangement admits 15 per cent more trees to the acre than the setting in squares and the ground can be worked different directions. Objections are urged to it, however, in that it does not admit of thinning trees by removal of alternate rows, as is sometimes desirable, and that one has to take a zigzag course in driving through the orchard. The accompanying sketch is explanatory of this method of planting.

In planting tracts of any size we do not recommend it. The system should be confined to planting small parcels of land where it is necessary to use every foot of available space.

#### BRINGING AN ORCHARD OR VINE-YARD INTO BEARING.

Fruit growing is a business pure and simple and in its successful operation is quite as apt to call forth the best energies of brain and brawn of those who are in the business, as in any other line of commercial activity. Just in the proportion that the orchard receives intensive and intelligent care, will it give corresponding returns for the investment of capital, time and labor. Above all things, do not plant too many varieties if you desire to be a factor among the commercial fruit growers. No greater mistake can be made. As an illustration, in planting ten acres of peaches and having on each acre a different variety: when this orchard comes into bearing there are so many varieties and so limited a quantity of each, that the commercial packer of dried or canned fruits does not feel inclined to pay what the fruit is worth, because there is not enough of any one kind to make it an object for him to handle it.

Growers in new localities are often concerned over the fact that there will be no outlet for the product. The handling and marketing of fruit has assumed such vast proportions that there are always commercial institutions eager enough to enter a new field, and exploit it as soon as the production is large enough to encourage the building of

packing houses for the handling of any particular product. Another serious mistake on the part of many growers, is to endeavor to harvest enormous crops when their trees are only two or three years old. The result of this unwise policy is in many cases to sacrifice the tree to such an extent that just when it should be bringing profitable returns, it was burdened too heavily when young, and in consequence either dies when it should be in its prime, or it takes years of extraordinary care to restore it to its proper vigor. It is just as much a mistake to expect too much from a young tree as it is to require a child to do a man's work. The care bestowed for the first two or three years in cultivating, pruning and irrigating, where the rainfall is insufficient to carry the trees through the long dry summer months, is the foundation for the upbuilding of a plant, which will redound to the credit of the owner and give him ample returns for his intelligent care and years of hard work.

The tendency toward overproduction in young trees is easily eliminated by pruning. Next to thorough cultivation there is nothing which is more vital to the life of a tree than this one thing. It is difficult to lay down specific rules on this point, but there are basic ones which can generally be observed in the handling of most deciduous trees.

After a tree is set, never fail to cut it back. This is now the general practice among the most successful orchardists, and is the result of years of experience. The following winter from three to four branches, properly distributed around the body of the tree, should be allowed to remain to form the head, and each one of these branches should have at least one-half of its growth removed, cutting away all laterals from them also. These leaders will eventually form the framework of the tree. Above all things do not shorten in a lateral starting near the terminal point of any of the branches, unless you wish to have a hideous crook in your tree. It is a great mistake to think that unless these small laterals are allowed to remain, the tree will not start. The result of the

first year's pruning will cause the trees to make an immense growth and will also induce them to grow stocky. The second winter heavy thinning will have to be followed and the pruning should be done with a view of causing the framework branches to spread out. After thinning, half the growth of the current season should be cut off and again remove all laterals from the framework branches. To the novice this severe cutting seems suicidal, but the results obtained in our own orchards have been so very satisfactory that the soundness of this method cannot be questioned. The third year leave from two to three laterals properly distributed on each of the main stems, but they in turn should be cut back at least one-half. The third year's cutting need not be so severe, but the thinning and shortening in of the fruit bearing branches should be carefully followed out. It is safe to assume that the trees in the fourth year have reached an age when they should bring ample returns, still pruning should be carefully followed out each season. Failure to prune severely when the trees are young means that there will be a lot of long spindling branches, with practically all the new growth at the tip ends. A heavy crop may be harvested the third year, but the branches will bend down under their heavy load, become sunburned and even break off in some cases, thus sacrificing a tree to the rapacity of a grower, who in his eagerness to harvest a crop has killed the "goose that lays the golden egg." The many advantages of this method of pruning are: (1) It makes a low heading and a more stocky tree, affording an umbrageous head, and thus protecting it from the hot rays of the scorching summer sun; (2) it enhances the carrying capacity of the tree, thus avoiding artificial props when maturing a crop of fruit; (3) it expedites the harvesting of the crop, by rendering it more accessible to the pickers, thus economizing time and expense; (4) it prolongs the life of the tree by reason of conserving its vital forces, and rendering it less liable to damage in the breaking of limbs and taxing its strength by carrying its fruits "close in."



# THE ORCHARD FRUITS

## THE APPLE.

In the temperate zone no variety of fruit is so widely distributed or has been more extensively planted than the apple. The list of varieties is amazing. "Downing's Fruits" alone lists about 3500 sorts. Following out the rule, which has dominated us for a number of years, we have scaled down our list of varieties, cataloguing only such kinds having distinct characteristics and of value either for home use or from a commercial standpoint. New varieties are never added to our list, unless we are convinced they possess points which make them worthy of cultivation. Varieties are variable as to localities and in planting in sections where apple culture is pursued commercially, the advice as to the best varieties to plant should be sought from experienced growers.

The best soil for this fruit is a deep, rich loam which will allow the free extension of the roots and is exempt from stagnant moisture. An extremely light soil should be avoided. The keeping qualities and the flavor and coloring of our mountain-grown apples at elevations of 5000 feet or more, are indeed hard to surpass.

It is the concensus of opinion among commercial growers that trees should be planted from 25 to 30 feet apart in orchard form. Trees should be cut back to 18 inches from the top of the ground after being set, except in the higher altitudes, where the snow in settling would cause the branches to break off, where the trees should be headed at not less than three feet from the ground. Apples are very much subject to sun scald and to the attack of the flat headed borer, the first few years after trees are set out. When headed low, protected with tree protectors, permitting of free circulation of air, and by giving the stem a coating of whitewash to which has been added soap and crude carbolic acid, little danger need be apprehended from either of these

evils. The wash is made in the following manner: Dissolve one-half gallon of soft soap in one-half gallon of hot water, adding one-fourth pint of crude carbolic acid. When mixing add five gallons of hot water and enough lime to make a mixture the consistency of paint.

All shoots starting out from the body of the trees, which are not required to form the head, should be rubbed off. The following winter they should be cut back at least one-half and thinned out so as not to leave more than three branches to form the framework, and these should be distributed in such a manner as not to crowd one another as the tree develops. Each one of these branches should be regarded as a subdivision to maintain the wood supply to eventually form a perfectly vase formed tree. The second winter not more than two laterals should be allowed to remain and if there is a tendency to crowd, not more than one on the framework branches, and their growth should be again shortened in one-half. The tendency as far as possible, should be to prune to an outside bud for the first two winters' pruning. With the head now practically formed, the orchardist must shape the tree in accordance with its development, leaving and shortening in the inside laterals if it shows a tendency to spread out, or if its inclination is to assume too upright a form, cause it to spread by leaving the outside laterals. The cutting back of the trees and judicious thinning prevents the long bare branches so noticeable in trees, which have not been systematically pruned every winter. The effect of this method of pruning is to cause the structural branches to be larger in proportion to their length, the load of fruit is carried closer to the trunk and even with a very heavy crop the necessity of propping is eliminated very largely. Props are an expensive item and they also interfere very materially with the harvesting of the crop so that a method of pruning which will dispense with them is worthy of very careful consideration.

**Thinning the Fruit.** Even with the mode of pruning which has been recommended, the trees in some seasons may overbear, and when this occurs thinning should be resorted to. This work is tedious and slow, but it insures marketable fruit throughout on the trees, and also their vitality, causing them to yield uniform annual crops.

## SUMMER APPLES.

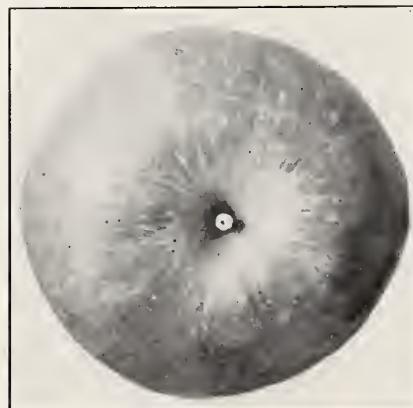
**Caroline June.** (Red June). Small or medium; deep red; good, productive, hardy, a free grower; very popular. August.

**Early Harvest.** Medium to large size; pale yellow; tender, with a mild, fine flavor. Tree a moderate, erect grower, and a good bearer; a beautiful and excellent variety for both orchard and garden, being one of the first to ripen. August.

**Red Astrachan.** Large, roundish, nearly covered with deep crimson, overspread with a thick bloom; very handsome; juicy, good, though rather acid. The tree is very hardy, a free grower, with large foliage, and a good bearer; highly esteemed on account of its fine appearance, earliness and hardness. August.

**Sweet Bough.** (Large Yellow Bough). Large, oblong, skin smooth, pale greenish yellow; very tender, crisp; rich, sweet aromatic and fine. Tree a moderate grower, bears abundantly, and forms a round head. One of the best. August to September.

**Yellow Transparent.** Mr. Downing's description: "A Russian variety, which promises to be valuable for a cold climate, as an early fruit of good quality, ripening before the Tetofsky, with more tender and delicate flesh, but does not continue long in use. It is said that the tree, so far, has proved to be very hardy, moderately vigorous, upright, and an early and good bearer annually. Fruit medium, roundish, oblate, slightly conical; skin pale yellow when fully matured; flesh white, half fine, tender, juicy, sprightly, sub-acid; quality good to very good. Season, early in August and a week or two before Tetofsky."



Alexander Apple.

## AUTUMN APPLES.

**Alexander.** Origin, Russia. A very large and beautiful deep red or crimson apple, of medium quality. Tree very hardy, a moderate grower and rather a light bearer. September and October.

**Chenango Strawberry.** (Sherwood's Favorite). Large, roundish, bright red and yellow, very beautiful in appearance, and a pleasant apple. Tree a rapid, handsome, upright grower, and a good and early bearer. September and October.

**Duchess of Oldenburg.** A large, beautiful Russian apple; roundish; streaked red and yellow; tender, juicy and pleasant. A kitchen apple of best quality, and esteemed by many for the dessert. Tree a vigorous, fine grower, and a young and abundant bearer. September. Succeeds well in the Northwest, where most varieties fall.

**Maiden's Blush.** Large, flat; pale yellow with a red cheek; beautiful, tender and pleasant, but not high flavored. Tree an erect, free grower and a good bearer. A valuable market apple. September and October.

**Twenty-Ounce.** A very large, showy, striped apple of fair quality. Tree a free, spreading grower and fine bearer; excellent for baking and of pleasant flavor, though not rich; very popular in the markets. October to December.

**Wolf River.** A new, large, handsome apple; hardy, vigorous and fairly productive; greenish yellow, shaded with light and dark red; flesh rather coarse, juicy, pleasant, with a peculiar, spicy flavor. November.



Ben Davis Apple.

## WINTER APPLES.

**Arkansas Black.** Medium to large, round or slightly conical; yellow where not covered with a beautiful dark maroon, approaching to black; flesh firm, fine-grained, juicy, a long keeper. Tree a vigorous grower and very productive. A valuable market apple. December to April.

**Baldwin.** Large, bright red, crisp, juicy and rich. Tree vigorous, upright and productive. In New England, New York, Ontario and Michigan this is one of the most popular and profitable sorts for either table or market. December to March.

**Ben Davis.** (New York Pippin, Kentucky Steak, etc.). A large, handsome striped apple of good quality. Tree very hardy, vigorous and productive; a late keeper; highly esteemed in the West and Southwest.

**Esopus Spitzenburg.** Large, oblong, and smooth, nearly covered with rich, lively red and dotted with yellowish russet dots; on shaded side yellowish with broken stripes of red; flesh firm, crisp, juicy, with a delicious aromatic flavor. An old stand-by, whose popularity has never waned. November to March.



Delicious Apple.

**Bismarck.** Originated in New Zealand; tree snort, stocky growth, with thick, healthy foliage, hardy and productive; is doing well in nearly all places. Fruit large, handsome, yellow, shaded and covered with red; tender, sub-acid, quality not best; good for both dessert and cooking. Its most remarkable characteristic is its early fruiting habit; one-year grafts have produced several fine specimens and two-year-old trees seldom fail to produce fruit. Trees on dwarf stocks grown in pots or tubs make beautiful decorative specimens. Two-year single-stem trees about 18 inches high produce fine specimens. Late fall and early winter.



Jonathan Apple.

**Delicious.** A remarkable variety introduced in the West several years ago where it is being largely planted and rapidly taking first rank both for commercial and home orchards. No new variety has ever so quickly gained popularity in so many different apple sections of our country. Fruit large, nearly covered with brilliant dark red, flesh fine grained, crisp and melting, juicy with a delightful aroma; of very highest quality. A splendid keeper. Tree one of the hardest, a vigorous grower, with good foliage. A regular annual bearer.

**Gano.** A popular winter apple. Tree spreading in orchard, vigorous, very hardy, having stood 32 degrees below zero without injury. An early, annual and prolific bearer. Fruit large, bright red on yellow ground, smooth, regular. In a letter to W. G. Gano, under date of December 29, 1883, Charles Downing says: "It is a handsome, well shaped apple of very good quality. Flesh white, fine grained, tender, mild, pleasant, sub-acid." Its perfect form, brilliant color, hardiness and splendid keeping qualities are just what the market demands. Season February to June.

**Grimes' Golden.** (Grimes' Golden Pippin) Medium to large size; skin golden yellow, sprinkled with gray dots; flesh crisp, tender, juicy, sprightly; very good to best. Tree hardy, vigorous, productive; originally from Virginia; grown in Southern Ohio. January.



Arkansas Black Apple. (Page 16.)

**Jonathan.** Medium, conical; red; tender and juicy with a sprightly vinous flavor; very hardy and very productive; excellent for table or market; a great favorite wherever grown; specially commended as a market apple; a fine keeper. October to January.

**Mammoth Black Twig.** (Paragon). Fruit large to very large, roundish, somewhat flattened; dark red, slightly streaked; flesh firm, yellow, sub-acid and juicy and of excellent quality; a fine keeper. Its size, splendid shipping and keeping qualities render it one of the most valuable varieties. Should be widely planted. November to May.

**McIntosh Red.** Originated in Ontario some twenty years since, but is not widely known. Tree very hardy, long-lived, vigorous, good annual bearer of fair, handsome fruit of excellent quality, for home or market use. Fruit above medium, roundish, oblate; skin whitish yellow, very nearly covered with dark rich red or crimson, almost purplish in the sun. Flesh white, fine, very tender, juicy, mild, sub-acid; very valuable acquisition. November to February.

**Missouri Pippin.** Medium to large; pale whitish yellow, shaded with light and dark red, often quite dark in the sun; flesh whitish, a little coarse, crisp, moderately juicy, sub-acid. January to April.

**Northern Spy.** Large, striped and quite covered on the sunny side with dark crimson and delicately coated with bloom. Flesh juicy, rich, highly aromatic, retaining its freshness of appearance and flavor till July. The tree is a remarkably rapid, erect grower, and a great bearer. Like all trees of the same habit, it requires good culture and occasional thinning out of the branches, to admit the sun and air fully to the fruit. Both leaf and blossom buds open a week later than other varieties. One of the finest late keeping apples.



Mammoth Black Twig Apple. (Page 17.)

**Northwestern Greening.** Large, smooth, greenish yellow; flesh fine grained, firm and juicy; good quality; extremely hardy and a strong, handsome grower. December to April.



Rome Beauty Apple.

**Rawles' Genet.** (Rawles' Janet, Never Fail, etc.). Medium to large size; yellow, striped with red; crisp, juicy, rich; a free grower; prolific bearer. One of the most popular winter apples in the South and Southwest.

**Rhode Island Greening.** Everywhere well-known and popular; tree spreading and vigorous; always more or less crooked in the nursery; a great and constant bearer in nearly all soils and situations; fruit rather acid, but excellent for dessert and cooking. Towards the South it ripens in the fall, but in the north it keeps well until March or April.

**Rome Beauty.** A grand apple and one of the most popular sorts. A very late bloomer, therefore never fails to bear a crop; yellow, shaded and striped with red; tender, juicy, good. Its large size, exceptional beauty make it very popular. November to February.

**Stayman's Wine Sap.** Tree vigorous, hardy, spreading. An early bearer and very productive; fruit medium size, round, approaching conic; skin smooth, greenish yellow, splashed and striped with red and purple; flesh yellow, firm, tender, juicy, rich, mild, sub-acid, aromatic, quality best. Is large and more beautiful than Wine Sap. Season January to May.



Stayman's Winesap Apple.

**Talman's Sweet.** Medium size; pale, whitish yellow, slightly tinged with red; flesh firm, rich and very sweet; excellent for cooking. Tree a free grower, upright and very productive. November to April.

**Wagener.** Medium to large size; deep red in the sun; flesh firm, sub-acid and excellent. Tree a vigorous, handsome, upright grower, and very productive; an excellent variety, introduced from Penn Yan, Yates County, N. Y. December to May.

**Wealthy.** Originated near St. Paul, Minn. Fruit medium, roundish; skin smooth, oily, mostly covered with dark red; flesh white, fine, juicy, vinous, sub-acid, very good. Tree very hardy, a free grower and productive. An acquisition of much value on account of its great hardiness and good quality. December to February.

**White Winter Pearmain.** Medium, oblong; pale yellow, thickly sprinkled with minute brown dots; flesh yellowish, tender, crisp, juicy, very pleasant sub-acid flavor; succeeds well in all parts; a standard market sort, widely distributed; a great favorite among commercial growers. November to January.

**Wine Sap.** Large, roundish; deep red; medium quality; keeps well. Tree a moderate grower and good bearer; succeeds well in the West and is there valuable and popular. December to May.



White Winter Permain Apple. (Page 18.)

**Winter Banana.** Fruit large, fine grained, a beautiful gold yellow shaded with bright red, unusually handsome. Flesh of golden yellow, very large and highly perfumed, and considered the finest flavored apple grown; an excellent table variety. Tree hardy. An early and prolific bearer.



Winter Banana Apple.

**Yellow Bellflower.** Large; yellow, with a tinge of red on the sunny side; flesh crisp, juicy, with a sprightly, aromatic flavor; a beautiful and excellent fruit. Valuable for baking. The tree is a free grower and good bearer. November to April.

**Yellow Newton Pippin.** Large; roundish, more or less flattened of rather irregular shape; skin smooth, golden yellow; flesh firm, crisp, juicy; one of the standard varieties in California and probably more extensively planted than any other apple. Sells for higher prices in the European markets than any other; a wonderful keeper. January to May.

**York Imperial.** (Johnson's Fine Winter). Medium to large; yellow, shaded red; firm, juicy, sub-acid. An excellent shipping apple.



Yellow Bellflower Apple.

#### CRAB APPLES.

##### For Ornament or Preserving.

**Hyslop.** Almost as large as the Early Strawberry apple; deep crimson; very popular in the West on account of its large size, beauty and hardness; late. Tree remarkably vigorous.



Transcendent Crab Apple.

**Transcendent.** A beautiful variety of the Siberian Crab; red and yellow. Tree a remarkably strong grower.

**Whitney.** Large, averaging one and a half to two inches in diameter; skin smooth, glossy, green, striped, splashed with carmine; flesh firm, juicy, and flavor very pleasant; ripe latter part of August. Tree a great bearer and very hardy; a vigorous, handsome grower, with dark green, glossy foliage.

## THE PEAR.

The pear is a fruit cultivated throughout the Inter-Mountain and Coast States generally, extending into Mexico. It does well in all soils, but succeeds best on a heavy loam. Of the whole range of commercial fruits it seems to thrive better in alkali soils than any other and is being largely planted in vineyards and orchards where the vines and trees have been killed. The trees are usually planted 20 to 25 feet apart on the square. The practice of cultivation is much the same as with the stone fruits. Pruning is usually to the vase form of tree. The fruit should be thinned out on heavily loaded trees or else it is liable to run to small and unmerchantable sizes. The fruit of summer and autumn sorts should be gathered at the first indication of ripeness, the first sign being the tendency of the stem to part from the spur when the pear is gently raised up. Late pears should hang as long as possible; a slight frost will not injure them as much as premature gathering. They should then be placed in a dark cool place, where they will ripen, acquiring a delicious aroma, fine flavor and a melting characteristic pleasing to the palate when eaten. The demand for this fruit both in the green and dried state is increasing yearly, making it a most profitable product.

The trees should be cut back to 18 inches from the top of the ground after planting. The following winter all but three or four branches should be cut out, and at least one-half of their tops removed. The second winter the tree should be pruned severely again, removing not less than one-half of the current season's growth and aiming to allow from one to two shoots on each of the branches from the year before. Prune the tree so as to cause it to spread and prevent overcrowding of the main branches when the tree reaches maturity. The third season cut back one-third of the new growth and thin out such branches as are showing an inclination to crowd the center of the tree too much. The form of the tree will be a sufficient guide as to what plan to follow to develop a shapely tree in future years. Prune every year. No tree responds so readily to the pruning shear as the pear; it assumes the characteristic vase form as if shaped by a magic hand. The tendency to allow the trees to grow unpruned, and as a result to send up a lot of straight shoots

so closely crowded that they look like bean poles, is a common and reprehensible practice among many growers, and in consequence of this the fruit is all in the tops of the trees. If they do happen to have a heavy crop, unless very carefully propped, they break off. Pruning the tree regularly each year causes it to not only become stocky, but also develops a bearing surface, which starts where the branches diverge from the main stem, to the very top of the tree. The tree in addition to this, becomes self-supporting and it will carry a crop of fruit through the season with hardly a prop to support the heavily laden branches.

### GENERAL COLLECTION.

**Bartlett.** Large; skin very thin, clear lemon-yellow with soft blush on the sunny side; flesh white, buttery, very juicy and highly flavored; the best summer pear in existence; thrives in all the Intermountain and Coast States. The most popular of pears and more highly esteemed for canning, shipping and drying than any other. August.



Bartlett Pear.

**Beurre Clairgeau.** Large; yellow, shaded with orange and crimson, covered with russet dots; flesh yellowish, buttery, juicy and granular; one of the best varieties for transportation. September.

**Beurre d'Anjou.** Large; russet-yellow shaded with crimson; melting, juicy, rich and delicious; valuable for market and table. September.

**Beurre Bosc.** A large fine pear with long neck; cinnamon-russet, handsome; half melting, juicy, slightly perfumed and delicious; tree fine grower and productive; one of the most valuable of our autumn pears. September.

**Clapp's Favorite.** Large; pale lemon-yellow, marbled with crimson on sunny side and thickly sprinkled with brown dots; flesh finely-grained and melting, with a rich vinous flavor. July.

**Doyennedu Comice.** A French pear of recent introduction and of much promise; fruit large; skin greenish yellow, shaded with crimson in sun; flesh buttery, rich and slightly aromatic. October.

**Duchesse d'Angouleme.** Very large; dull greenish-yellow, spotted with russet; flesh white, buttery, but not of first quality in flavor. September.

**Easter Beurre.** Large, roundish, often sprinkled with many dots and patches; flesh white, fine-grained, juicy, sweet, rich flavor; a most desirable winter pear and an excellent shipper; tree a rapid grower and a very abundant bearer. October to January.

**Flemish Beauty.** Large; pale yellow, marbled with light russet; flesh yellowish-white, not fine-grained but very juicy and melting; good bearer and very hardy. September and October.

**Howell.** Large, waxen, yellow, sprinkled with minute russet dots; flesh whitish, juicy, brisk, vinous; vigorous grower and an immensely prolific bearer. August.



Kieffer's Hybrid Pear.

**Kieffer's Hybrid.** Large; skin rich golden-yellow, sprinkled thickly with small dots and often tinted with red on one side; flesh slightly coarse, juicy, of rather inferior flavor; tree very vigorous, an early bearer and very prolific and more widely distributed throughout the United States than any other pear. October.

**Lawson or Comet.** Large; brilliant crimson color on yellow ground; flesh crisp, juicy, but of rather inferior flavor; a firm and good shipper; the most attractive of all early pears for market, on account of its beautiful exterior. Its large size and earliness make it one of our most valuable shipping pears. June.

**P. Barry.** A most valuable winter pear, originated by the late B. S. Fox, of San Jose; large to very large; ovate pyriform; skin yellow, nearly covered with russet dots and blotches; flesh juicy, fine-grained, flavor sprightly, rich, excellent. The tree is a vigorous grower and heavy bearer, and in habit is very much like the Winter Nelis; an excellent keeper, it is worthy of extensive cultivation. December to March.

**Seckel.** This small but most delicious pear originated on the farm of Mr. Seckel, near Philadelphia. Without question the richest and most highly flavored variety known. Its highly concentrated, spicy, honeyed flavor is not equalled by any other variety. Skin brownish-green with a lively russet-brown cheek; flesh whitish, buttery, juicy and melting. August to September.

**Winter Bartlett.** This fine pear originated in Eugene, Oregon. Fruit large, closely resembling the famous Bartlett in shape and appearance, but ripening four months later; skin yellow, slight blush on side exposed to the sun; perfectly smooth, sprinkled with large russet-brown dots; flesh not quite as fine-grained as the Bartlett, but tender, juicy and melting and with a flavor almost identical to the Bartlett. Its fine flavor, unexcelled keeping qualities, combined with its lateness, places it in the front rank as one of the finest of winter pears, worthy of extensive cultivation. In every way a grand fruit. November.

**Winter Nelis.** Medium; skin yellowish-green, dotted with gray russet; flesh yellowish-white, fine-grained and abounding with juice of a rich, saccharine, aromatic flavor; thrives best in warm localities and is especially adapted to a warm dry climate; a regular bearer. An excellent shipper and good keeper. December.

#### DWARF.

The following varieties are worked on quince root as dwarfs and are to be recommended for gardens or where space is too limited to permit the growing of standard trees: Bartlett, Beurre Hardy, Duchesse d'Angoleme, Easter Beurre, Winter Bartlett and Anjou.

### THE CHERRY.

The popularity of this, the initial stone fruit of the season, is unquestioned. The firmness of the leading shipping varieties permits of their being packed when almost ripe for Eastern shipment, and this accounts for the enthusiasm with which our cherries are received in the Eastern markets. The tree thrives best in a deep rich alluvial soil, retentive of moisture, and also well drained. Plant the trees 25 feet apart. Low heading is important as the tree is subject to sunburn, the bark being very sensitive. The trees should therefore be headed back to 18 inches. Three branches should be allowed to grow to form the head of the tree and these should be distributed in such a manner as to prevent forks, as the tree has a tendency to split as it grows older. The first winter, these

branches should be cut back one-half and the following season not more than one to two branches should be allowed to grow from those left the first year. The third season the new growth should be shortened in about one-third, and some of the laterals appearing near the point of divergence from the main stems should not be cut off but merely shortened in, for the shade they furnish is one of the essential features in the development of the young trees. This same method of pruning should be followed until the fifth year. In after years the cutting should be confined to the removal of branches which are interfering and overcrowding.

The soil in which our trees are grown is particularly well adapted to the development of a perfect root system.

#### HEART CHERRIES.

Fruit heart-shaped with tender, sweet flesh. Tree of rapid growth, with large, soft, drooping leaves.

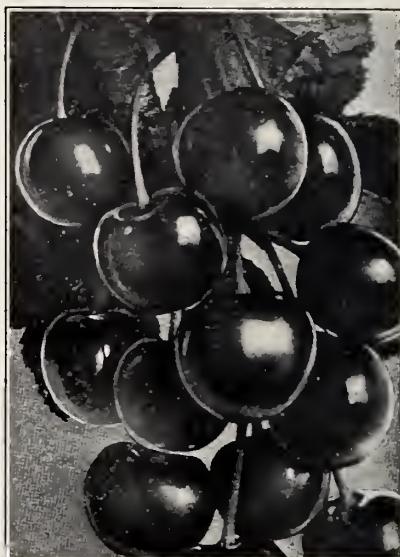


**Black Tartarian Cherry.**

**Black Tartarian.** Very large, purplish black; half tender; flavor mild and pleasant. Tree a remarkably vigorous, erect and beautiful grower and an immense bearer. Ripe last of June and beginning of July. One of the most popular varieties in all parts of the country.

**Black Republican.** Supposed to be a cross between the Napoleon Bigarreau and Black Tartarian, having the solid flesh of the former and color of the latter. Very late and good.

✓ **Young's Large Black.** Very large; liver color; flesh very firm, fine flavor. Ripens early in July. An excellent market variety.



**Bing Cherry.**

#### BIGARREAU CHERRIES.

These are chiefly distinguished from the preceding class by their firm flesh. Their growth is vigorous, branches spreading and foliage luxuriant, soft and drooping.

**Bing.** Originated by Seth Lewelling, from seed of Black Republican. Fruit large, dark brown or black, very fine, late; a good shipping variety.

**Centennial.** A seedling of Napoleon Bigarreau; larger than its parent, and valuable on account of its shipping qualities; very sweet. June.

**Lambert.** Fruit of largest size and of fine quality; color deep rich red; flesh firm and of fine flavor; a fine market variety. Ripens two weeks later than Napoleon Biggarreau.

**Napoleon (or Royal Anne).** A magnificent cherry of the largest size; pale yellow, with a bright red cheek; flesh very firm, juicy and sweet. Tree a vigorous, erect grower and bears enormous crops; ripens late; valuable for canning.

**Windsor.** Originated at Windsor, Canada, and introduced by Ellwanger & Barry. Fruit large, liver-colored, flesh firm, and of fine quality. Tree very hardy and prolific.

**DUKE AND MORELLO CHERRIES.**

These two classes of cherries are very distinct from the preceding. The trees are of smaller size and grow more slowly; the leaves are thicker and more erect and of a deeper green. The fruit is generally round, and in color varying from light red to dark brown.

The Dukes have stout, erect branches usually, and some of them, like Reine Hortense, quite sweet fruit; while the Morellos have slender, spreading branches and acid fruit, invariably. These two classes are peculiarly appropriate for dwarfs and pyramids, on the Mahaleb stock, and their hardiness renders them well worthy of attention in localities where the Heart and Bigarreau are too tender.



**May Duke Cherry.**

**Early Richmond.** An early, red, acid cherry, very valuable for cooking early in the season. Ripens through June. Tree a free grower, hardy and very productive.

**English Morello.** Large; dark red, nearly black; tender, juicy, acid, rich. Tree dwarf and slender; makes a fine bush on the Mahaleb. If trained on a north wall, fruit will be available during August. Valuable.

**Large Montmorency.** Large; red; productive, ten days later than Early Richmond. Last of June.

**Late Duke.** Large; light red; late and excellent. Tree robust and makes a nice dwarf or pyramid. End of July. Valuable.

**May Duke.** An old, well-known, excellent variety; large; dark red; juicy, sub-acid, rich. Tree hardy, vigorous and fruitful, ripens a long time in succession; fine for dwarfs and pyramids. Middle of June.

**Olivet.** A French variety; this sort takes a place not heretofore occupied among early cherries. Fruit large and globular, with a very shining, deep red color; flesh red, tender and vinous, sweet; sub-acid flavor.



**Late Duke Cherry.**

**Reine Hortense.** A French cherry of great excellence; large, bright red; tender, juicy, nearly sweet and delicious. Tree vigorous and bears well; makes a beautiful pyramid.

**Royal Duke.** Splendid, large, red, hardy, very showy; a splendid market variety. Ripens in July; ripens after the May Duke.



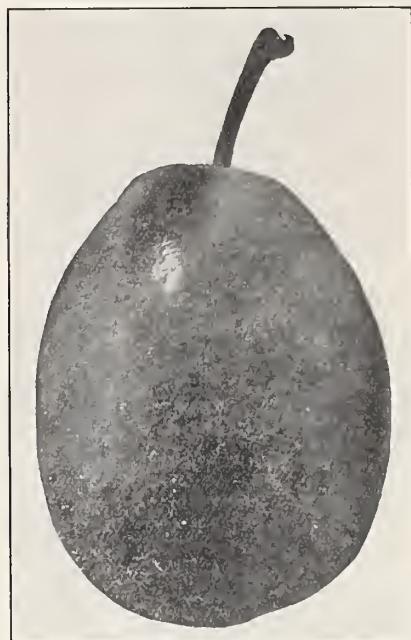
**Sixteen to One Cherry.**

**16 to 1.** A cross between the Bigarreau and one of the Duke varieties. Large; red; rich, sub-acid. Tree annual cropper and heavy bearer. Fruit ripens through the month of August, when cherries are scarce and high. The most profitable cherry for commercial planting ever introduced.

**Wragg.** Very hardy; vigorous and productive; medium, dark purple; fine quality. August.

## THE PLUM.

Plums and prunes are so closely allied that remarks pertaining to one fruit are equally applicable to the other. Practically speaking the prune is characterized by its sweet, firm flesh and has the property of drying and curing without the seed being removed, making an excellent fruit, recognized as having great value in the commercial world.



**Bradshaw Plum.**

The plum in its geographical distribution covers a wide range of soils and climates. This adaptability is undoubtedly due largely to the various stocks on which the different sorts are budded or grafted. Twenty to twenty-five feet apart is a standard distance to plant the trees.

Being a sprawling grower, the tree should be pruned quite severely when young and headed back to 18 inches from the surface of the ground. The tree, like the cherry, is subject to sun scald, and this is readily overcome by having the branches start down low to give ample shade to the body of the tree. The first four seasons following planting, practically the same method of pruning as directed for other fruits should be adopted. After the fourth season, the pruning should be confined to removing interfering branches, dispensing with the

shortening in of the laterals, for experienced growers have learned that this only promotes the growth of an immense amount of young wood, which does not produce fruit. When it is noticed that the trees no longer present a healthy appearance and fail to produce profitable crops, some cutting back will have to be resorted to in order to rehabilitate the tree to former vigor.

The Oriental varieties are coming more into favor. The trees grow rapidly, are heavy and regular bearers, and adapt themselves to a wide range of territory. The fruit is very showy and highly flavored and its shipping qualities are unexcelled.

### GENERAL COLLECTION.

**Bavay's Green Gage.** (Reine Claude de Bavay). An excellent foreign variety; fruit large, greenish-yellow streaked with green; flesh yellow, tender, juicy, melting, rich. A first-class dessert and canning plum; larger than the Green Gage and somewhat later. August.

**Bradshaw.** Large, reddish purple, juicy and pleasant; adheres partially to the stone, but becomes nearly free when fully ripe; tree very vigorous; as it blooms late, it seldom fails to bear a crop. Late July.

**Burbank.** Introduced by Luther Burbank. Fruit is large, nearly globular, clear cherry-red, with lilac bloom; flesh deep yellow, very sweet, with a peculiar and most agreeable flavor; tree very vigorous, often commencing to bear when only two years old. Late June.

**Coe's Golden Drop.** Very large; light yellow; flesh sweet and delicious; adheres partially to the stone; tree very vigorous; a standard late variety for canning. Late September.

**Damson.** Small, oval; skin purple; flesh melting, rather tart; a good canning variety.

**Green Gage.** Medium, round, skin tender, yellowish green; one of the richest of plums; separates freely from the stone; tree a good grower. Middle of July.

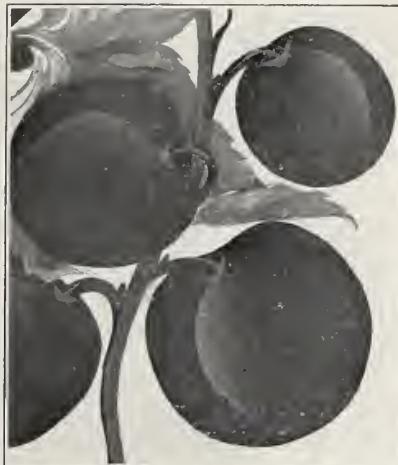
**Gueili.** Extensively grown for market. Tree a hardy, very strong, vigorous, upright grower; an early and very abundant bearer. Fruit large, roundish, oval; skin dark purple, covered with a thick, blue bloom; flesh pale yellow, a little coarse, rather firm, juicy, sweet, sprightly, sub-acid; free stone. Season last of August and first of September.

**Lombard.** (Beecker's Scarlet). Medium, round, oval; violet-red; juicy, pleasant and good; adheres to the stone. Tree vigorous and productive. A valuable market variety; one of the most hardy and popular. Last of August.

**Peach Plum.** Very large; skin light brownish red; flesh rather coarse, juicy sprightly; separates from the stone.

**Prunus Simoni.** (Apricot Plum). Large, flattened; bright red or dark cinnabar color; flesh fine, apricot yellow, firm, rich, sweet and delicious, with a strong pineapple flavor; very small stone; adheres to the pit.

**Satsuma.** (Blood). Large, globular, with sharp point. Color, purple and red with blue bloom; flesh firm, juicy, dark red or blood color, fine quality; pit very small. Hardy and vigorous grower. August.



Shropshire Damson Plum.

**Shropshire Damson.** Medium, dark purple; very productive; best for preserving. October.



Wickson Plum.

**Wickson.** Fruit remarkably handsome, very large, long, heart-shaped; color deep maroon red covered with white bloom; flesh firm and meaty, yellow, rich and aromatic; cling; pit small. Tree an upright, vigorous grower. Excellent keeper and shipper; ie being planted largely for market. Early September.

**Yellow Egg.** Very large, egg-shaped, productive; excellent for cooking. August.

## THE PRUNE.

Prunes, as all experienced horticulturists know, are the dried product of certain varieties of plums, though in the nursery trade the word has a significance of much wider application, meaning the commercial growing of these varieties as an independent fruit. The same general remarks as to soils and climates given under the heading of Plums apply to prune culture.

**Fellenberg.** (Large German Prune, Swiss Prune, Italian Prune). Medium size, oval; dark purple; flesh juicy and delicious; parts from the stone; fine for drying. Treed a free grower and very productive.



Fellenberg German Prune.

**French Prune.** (Petite d'Agen, Burgundy Prune). The well-known variety so extensively planted for drying; medium size, egg-shaped, violet purple; juicy, very sweet, rich and sugary; very prolific bearer.

**German Prune.** (Common Quetsche). From this variety the dried prunes exported from Germany are made; the name, however, has been applied to numerous plums and prunes, which are all sold under it. The fruit of the true German Prune is long, oval and swollen on one side; skin purple, with a thick, blue bloom; flesh firm, green, sweet, with a peculiar pleasant flavor; separates readily from the stone. September.

**Hungarian Prune.** (Grosse Prune d'Agen). Very large; dark red; juicy and sweet. Its large size, bright color, productiveness and shipping qualities render it a profitable variety for home or distant markets.

**Sugar Prune.** The following is an accurate description, taken from the report of B. M. LeLong, Secretary of the California State Board of Horticulture: "An extremely early prune, ripens August first; cures superbly rich, with a yellow flesh, tender and rich

in sugar juice; skin very tender, at first of a light purple, tinted with green, changing at maturity to dark purple, covered with a thick white bloom."

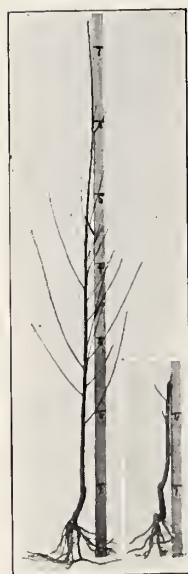
**Silver Prune.** Originated with W. H. Pettyman, of Oregon. Mr. Pettyman says of it, "that it is a seedling from Coe's Golden Drop, which it most resembles, but is more productive, one tree of the Silver Prune producing more fruit than five of Coe's Golden Drop." Samples of dried fruit brought the highest price in the San Francisco market, and it is, in the judgment of fruit experts, because of its large size and superior flavor, entitled to rank first among prunes and drying plums. September.

**Tragedy Prune.** A new prune originated by Mr. Runyon, near Courtland, in Sacramento County. It would seem to be a cross between the German Prune and Duane's Purple. Fruit medium size, nearly as large as the Duane Purple; looks much like it, only it is more elongated; skin dark purple; flesh yellowish green, very rich and sweet; frees readily from the pit. Its early ripening (in June) makes it very valuable as a shipping fruit.

## THE PEACH.

The peach prefers a light, deep, sandy loam, preferably inclined to be dry rather than too moist, but well drained.

Nothing will bring a peach tree to a premature end quicker than not to prune. The trees as they stand in nursery rows have the limbs removed to a point about 12 inches from the ground. Instead of removing all these limbs when topping the tree at 18 inches, they should be cut back to about two inches long, so in case the buds on the main body do not start in the spring, the buds and the smaller branches will. If the buds do start on the main body, the branches may be clipped off with a shear. This is



Tree Showing  
Nursery Growth,  
and Properly Cut  
Back for Planting.

a very important point, particularly with peach trees, and if followed by planters generally would in many cases obviate the start out at the proper height from the ground. From three to five branches should form the head of the tree, and these should be cut back to 12 inches the first winter after planting, and dis-

tributed in such a manner on the body of the tree so as to prevent crowding and the development of forks.



First Year After Planting.

The aim of the pruner should be to open up the tree and cut out any central leaders. The second year a severe heading back again should take place, not leaving over two feet of the new growth. Thin out the numerous small laterals,



Second Year After Planting.

allowing only a few to remain and remove any which are close to the point where the framework branches have been topped. If such laterals are allowed to remain, the new growth in the spring will force its way through them instead of forcing buds out where they belong, making an ugly crook in the tree.



Third Year After Planting.

The third season from two to three shoots should be allowed to start from the branches of the year before, and they in turn should have their growth shortened in about one-half. The head of the tree will in the third season be fully formed and a medium crop of fruit may be expected. The fourth year the multiplication of new branches should be allowed to develop from those of the year before in about the same ratio, at the same time following out the shortening in method. Never neglect to follow up the pruning and thinning of a peach tree every year, no matter how old. Topping without thinning in after years causes the development of immense amounts of barren wood, and has a tendency to smother the tree. Trees should be set about 20 feet apart, unless in extremely light soil, where 16 feet is permissible. To obtain large, firm fruit, thinning should be resorted to if the trees are heavily laden. This should be done when the fruit has set well and before the kernel has hardened.

**Alexander.** Medium to large size; skin greenish-white, nearly covered with deep rich red; flesh melting, juicy sweet. Tree vigorous and productive; ripens two weeks before Hale's Early; one of the largest and best of the extra early varieties, and valuable for market as well as for home use. Early June.

**Carman.** Large; resembles Elberta in shape; color creamy white or pale yellow with deep blush; skin very tough; flesh tender, fine flavor and quite juicy. Ripens with Early Rivers. One of the hardest in bud; in shipping qualities and freedom from rot it is unsurpassed. Promises to stand at the head for a general, long distance, profitable market variety, in quality, ranking superior to anything ripening at same time. Named for the great horticultural editor, E. S. Carman of the *Rural New Yorker*, specimens being sent from Texas. He reported that it reached his office in "first-class condition, and while fully ripe on arrival, it kept perfectly sound for 24 hours longer, when the fruit was eaten. In quality it was found to be first-class, possessing a decided aroma. In this, as well as general appearance, it outranked any and everything in the line of peaches on the New York market." August.

**Chairs Choice.** Large; yellow, liberally blushed with red; free. About the same season, and very similar in other respects to Crawford's Late; it is, however, believed to be hardier in blossom, and is gaining in popularity as a profitable market variety.



Bearing Tree Properly Pruned.

**Chinese Cling.** Large; white, shaded red, fine quality. A favorite variety in the South. August.



Early Crawford Peach.

**Crawford's Early.** A magnificent, large, yellow peach, of good quality. Tree exceedingly vigorous and prolific; its size, beauty and productiveness make it one of the most popular varieties. Beginning of September.

**Crawford's Late.** A superb yellow peach; very large, productive and good; ripens here about the close of peach season. Last of September.

**Early Elberta.** This remarkable peach was produced by Dr. Summer Gleason, Kaysville, Utah, and may be well styled THE HE SQUIRREL of the peach family. Fruit large, slightly flattened, rather pointed; skin of a rich deep yellow, beautifully striped and splashed with red; tender, of fine quality. Ripens week to ten days ahead of the old Elberta. Tree vigorous, upright grower and good cropper.



Elberta Peach.

**Elberta.** A Georgia cross between Crawford and Chinese Cling, very large, well colored; all things considered, the finest yellow freestone in cultivation; no one can go amiss by planting it; fruit perfectly free from rot, and one of the most successful shipping varieties. September 15.

**Foster.** Originated near Boston. A large yellow peach resembling Crawford's Early, but of better quality. Ripe about the same time as Crawford's Early, or a little earlier.

**Hale's Early.** Medium to large; skin greenish, mostly mottled with red; flesh white, juicy, and sweet; good for shipping. Early August.

**Heath.** The most delicious of all clingstones; fruit very large; skin downy, cream-colored white, with a faint blush of red in the sun; flesh greenish-white, very tender and exceedingly juicy, with the richest, highest and most luscious flavor.

**Muir.** This very remarkable peach originated with G. M. Thissel, of Winters, California, who gives the following description: "I believe it to be a seedling from the Early Crawford, though the tree does not resemble the Crawford; the leaf is more like a willow. Is an excellent bearer, does not curl. The fruit is large to very large; is a very free stone; never saw one stick to the pit. It is a fine shipper, and one of the best canning peaches in the United States. It requires but little sugar, and many pronounce it sweet enough without any. As a drying peach it excels all others ever introduced into the market."



Phillips' Cling Peach.

**Orange Cling.** A most magnificent yellow cling of largest size; skin mostly covered with bright crimson; productive; ripens late.

**Phillip's Cling.** Fine, large; yellow; flesh firm, clear yellow to the pit which is very small. Preferred by canners to any other variety of cling; its firmness, fine texture of flesh and lateness, not ripening until other clings are practically harvested, makes a demand for this variety far beyond the supply. Early September.

**Salway.** An English peach; large, roundish; skin creamy yellow; flesh deep yellow, juicy, melting, rich. A valuable late peach for market.

**Seller's Orange Cling.** Very large; rich golden color; one of the very best clings; ripens with Late Crawford.

**Triumph.** One of the earliest peaches known. Fruit growers have, for many years, been looking for a good freestone market peach to take the place of the Alexander. The Triumph, originated by J. D. Husted, of Georgia, fully supplies their wants. It ripens with Alexander; blooms late; has large flowers; a sure and abundant bearer, and the tree makes a very strong growth. Several trees (two-year-old buds) produced this season over half a bushel of fruit each. The fruit is of large size, with a very small pit, and is indeed beautiful. Surface is yellow, nearly covered with red, and dark crimson in the sun. Flesh bright yellow, free when fully ripe, and of excellent flavor.

## THE APRICOT.

The apricot is one of the most beautiful and delicious fruits we possess, and its value is enhanced by the season of its ripening—between cherries and peaches.

**Blenheim, or Shipley.** Medium size; juicy and good; ripens ten or twelve days before the Moorpark. Very hardy.



Coe's Hemskirke Apricot.

**Coe's Hemskirke.** Originated in California, where it has met with great favor. In size fully as large as any other variety, and of better quality. The green fruit sells at \$5 more per ton and the dried at from 1½c to 2c per pound higher than other varieties. It is a regular bearer, the original tree having produced nine successive annual crops without a single failure.

**Jones.** (Chinese). Medium; yellow with red cheek; prolific; has always commanded highest prices in market for its earliness.

**Moorpark.** One of the largest and finest apricots; yellow with a red cheek; flesh orange, sweet, juicy and rich; parts from the stone; productive. Ripens last of July.



Royal Apricot.

**Royal.** A standard variety, skin dull yellow with an orange cheek; flesh pale orange, firm and juicy, with a rich, vinous flavor; excellent canning variety. July.

## THE NECTARINE.

The nectarine requires the same culture and management as the peach, from which it differs in having a smooth skin.

**Boston.** Large; bright yellow, with a red cheek; flesh yellow, sweet and pleasant flavor; freestone. First of September.

**New White.** Fruit rather large; nearly round; skin white, with a slight tinge of red when exposed; flesh white, tender, very juicy, with a rich, vinous flavor. August.

## THE QUINCE.

Flourishes in good garden soil, which should be kept mellow and well enriched. Prune off dead and surplus branches and thin out fruit if bearing too freely.



Apple or Orange Quince.

**Apple or Orange.** Large, roundish; of a bright, golden yellow color. Tree has rather slender shoots and oval leaves; very productive. This is the variety most extensively cultivated for the fruit. Ripe in October.

**Champion.** A new variety. The tree bears early and abundantly, and is vigorous.

**Meech.** A vigorous grower and immensely productive, frequently bearing fruit when two years of age. The fruit is large, lively orange-yellow, of great beauty and delightful fragrance; its cooking qualities are fine.

**Rea.** A seedling of the Orange Quince; one-third larger; of the same form and color; handsome, good and productive.

## THE ALMOND.

**IXL.** Introduced by Mr. Hatch, of Suisun, California, whose description we give: "Tree a sturdy, rather upright grower, with large leaves; nuts large, with, as a rule, single kernels; hulls easily, no machine being needed, nor any bleaching necessary; shell soft, but perfect. It bears heavily and, up to and including this season, regularly."

**King's Soft Shell.** Originated in San Jose, California; shell very thin and soft; regular and abundant bearer.

**Paper Shell.** Medium size, shell very tender, easily broken between the finger and thumb; kernel large, white and sweet.

## THE WALNUT.

**American Black Walnut.** A lofty tree of symmetrical form and majestic habit; nuts globular, very hard and deeply furrowed.

# TABLE, RAISIN, WINE GRAPES

There is scarcely a yard so small, either in country or city, that room for one to a dozen or more grapevines cannot be found. They do admirably trained up to the side of any building, or along the garden fences, occupying but little room and furnishing an abundance of the healthiest of fruit. Make the soil mellow, and plant the vines somewhat deeper than they stood in the nursery. Plant about eight feet apart, by the fence or building. For vineyards, make rows eight feet apart, six to ten feet in rows.

## AMERICAN TABLE GRAPES.

**Agawam.** (Rogers' No. 15). One of the best of the red varieties; bunch variable in size; sometimes large and handsome; flesh tender and juicy. Vine a good grower and bearer.

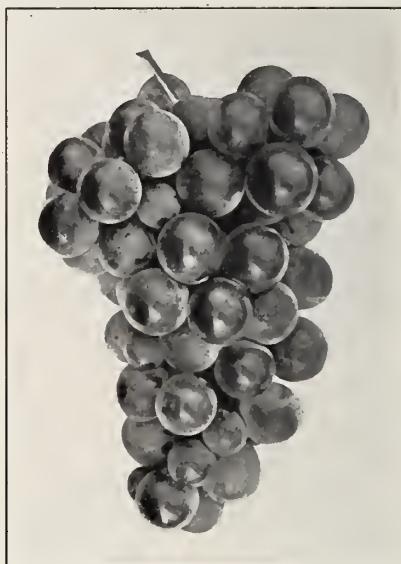


Agawam (Rogers 15) Grape.

**Brighton.** Resembles Catawba in color, size and forms of bunch and berry. Flesh rich, sweet and of the best quality, equal, if not superior, to Delaware; ripens early, with the Delaware, Eumelan and Hartford. Vine productive and vigorous.

**Campbell's Early.** Strong grower, with large, healthy foliage; productive; its keeping and shipping qualities are equalled by no other early grape. Ripens with Moore's Early, but will keep in sound, perfect condition long after that variety is gone. Bunch and berry large, glossy blue with blue bloom, sweet and juicy, seeds few and small, part readily from the pulp. Stands at the head of early black grapes for quality.

**Concord.** A large, handsome grape, ripening a week or two earlier than the Isabella; very hardy, productive and reliable; succeeds well over a great extent of country, and is one of the most popular market grapes.



Concord Grape.

**Delaware.** This fruit has fully maintained its reputation as one of the finest of our native grapes. The vine is comparatively slender, but grows freely and is perfectly hardy in this climate; ripens early. Bunch small and compact; berries small, light red, with a violet bloom; beautiful; sweet, sugary and vinous, with a musky aroma. It justly claims a place in every garden.

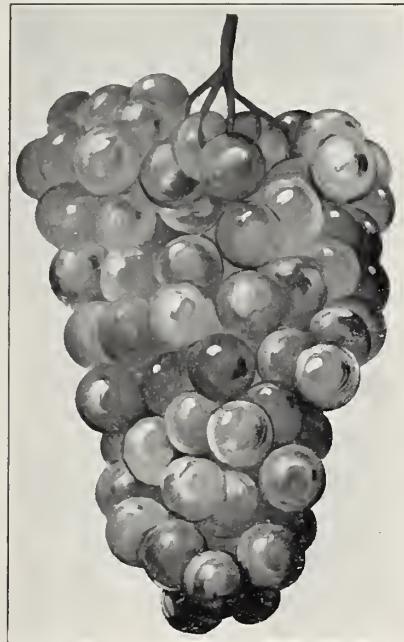
**Martha.** Bunches and berries of medium size; greenish white, with a thin bloom; flesh tender, with very little pulp, juicy, sweet and rich, hardy and productive. Ripens with Concord.

**Moore's Early.** Bunch medium; berry large, round, black with a heavy blue bloom; flesh pulpy and of medium quality; vine hardy and moderately prolific; ripens with the Hartford. Its large size and earliness render it desirable for an early crop.

**Niagara.** Occupies the same position among the white varieties as Concord among the black; the leading profitable market sort. Bunch and berries large, greenish white, changing to pale yellow when fully ripe. Skin thin but tough; quality much like Concord.

**Pocklington.** Bunch and berries large, when fully ripe a light golden yellow; juicy, tender, sweet, with little pulp. Vine thoroughly hardy, strong grower, free from mildew; productive. One of the most satisfactory white varieties.

**Salem.** (Rogers' No. 53). Bunch large, compact; berry large, round; coppery red; flesh tender, juicy; slight pulp; in quality one of the best. Ripens with Concord; vine healthy, vigorous and productive. One of the most popular of the Rogers'.



Niagara Grape.

**Vergennes.** Originated in Vermont. Bunch of medium size; somewhat loose, not uniform; berry large, round; skin thick, tough, red, overspread with a thick bloom; flesh quite pulpy, flavor pleasant but not rich. Vine vigorous, hardy, healthy and productive. Ripens with Concord. Keeps well.

**Worden.** Said to be a seedling of the Concord. Bunch large, compact, handsome; berries large—larger than those of the Concord. It ripens a few days earlier and is superior to it in flavor. Destined to become very popular for the vineyard and garden.

#### FOREIGN GRAPES FOR TABLE, RAISINS AND WINE.

**Black Hamburg.** A fine, tender grape, producing large, magnificent, compact bunches; berries black, very large and oblong. A great favorite everywhere.

**Black Prince.** Bunches large; berries black, medium to large, round; flavor good.

**California or Mission.** A well-known variety. A strong, sturdy grower, bearing large, black, medium-sized berries. Valuable for wine.

**Flame-Colored Tokay.** Bunches very large and handsomely formed; berries large; skin thick, pale red, or flame-colored; flesh firm, sweet, with a sprightly and very good flavor. A splendid shipping grape.

**Muscat of Alexandria.** Bunches large, long and loose; berries large, slightly oval, pale amber when ripe, covered with a thin white bloom; flesh firm, brittle; exceedingly sweet and rich; fine flavored. The variety most extensively planted for raisins.



Black Hamburg Grape.

**Rose of Peru.** Bunches very large; berries large, oval; skin thick, brownish-black; flesh tender, juicy, rich and sprightly; a fine market variety.

**Sultana.** Bunches compact, tapering; berries large, long and conical; skin thin, green; seedless, and flavored much like the Sweet-water. October.

**Thompson's Seedless.** (*Sultanina blanche*.) Identical with the Seedless Sultanas of Asia Minor. Vine an enormous bearer and very rapid grower; bunches very large; berries greenish-yellow, firm, oval, seedless; skin thin; much larger than the Sultana. This variety is attracting a great deal of attention in this valley, and it is preferred to the Sultana, having many qualities superior to it. The raisins are of a very superior quality, and are in good demand; a very early shipping grape, ripening in August. As a sherry grape much can be said in its favor.

**White Sweetwater.** Bunches large and compact; berries medium size, round; skin thin, transparent, greenish-yellow; pulp tender, juicy, sweet and richly flavored. One of the best early grapes.

#### FOREIGN WINE GRAPES.

**Alicante Bouschet.** A strong grower with a bunch of medium size; berries medium, very high in sugar; juice red. Gives a very superior wine, bright in color, and pleasant. A very valuable wine grape.

**Black Malvoise.** Vine a strong grower; berries large, oblong, reddish-black, with faint bloom; flesh juicy; flavor neutral; an immense bearer; an excellent table as well as wine grape.

**Burger.** (Putzscheare.) A German variety which has fully demonstrated its adaptability to our hot interior valleys; produces a light, white wine of excellent quality; an immense bearer. 2nd period.



Thompson's Seedless Grape. (Page 31.)

**Carignan.** A fine grower and most abundant bearer; bunch very large, moderately compact, shouldered; berry medium, slightly oblong, black with blue bloom, sweet and juicy; makes a superior type of red wine. 2nd period.

**Feher Zagos.** Vine a vigorous grower and immense bearer; very hardy and exceedingly productive in sandy and heavy soils; bunches large and compact; berries oval, yellowish-green. A valuable sherry grape. 2nd period.

**Grenache.** Not only an immense grower but a very heavy producer in the interior valleys; makes an excellent claret; always in good demand at the wineries.



Flame Tokay Grape. (Page 31.)

**Mission.** This is the old and well-known grape, first grown in California; bunches shouldered; berries medium, round, purple black, sweet and delicious. An old standby for making a good quality of claret.

**Petit Bouschet.** A moderate grower but very productive. Makes one of the choicest of red wines, smooth and of delicate flavor; cluster medium, cylindrical; berry medium, round, black and with very red pulp. Very largely used for blending clarets, which are deficient in color.

**Petit Syrah.** (Serine.) A very strong grower and immensely productive; makes a fine claret of high character. Cluster rather long and loose, shouldered; berry slightly oblong, medium, black, with blue bloom. Regarded very highly among wine makers as one of the best of the claret types.

**Zinfandel.** Bunches large, compact; berries round, dark purple, covered with a heavy bloom; a valuable claret wine grape; succeeds well in most any climate.

**NOTE.**—The foregoing wine Grape list comprises the more popular sorts, but none of them, except the Zinfandel and Mission, succeed well except in warm climates and long seasons.

## THE SMALL FRUITS

The Currant, Gooseberry, Blackberry, Raspberry, Dewberry and Loganberry need no introduction. They have been handed down to us, in their wild state, by the Creator, from His hand His savage children all over the world have eaten them. In recent years they have been brought to a high state of perfection. No garden, farm or orchard should be without them. They thrive almost everywhere, respond quickly to cultivation, yield early crops and return good profits to the grower. They command themselves alike to the commercial grower and the man who grows only in limited quantities for family use.

### THE BLACKBERRY.

In the garden, plant in rows about five feet apart, and four feet apart in rows. In the field, plant in rows six feet apart, and three feet apart in the rows. They may be planted in the fall or spring.



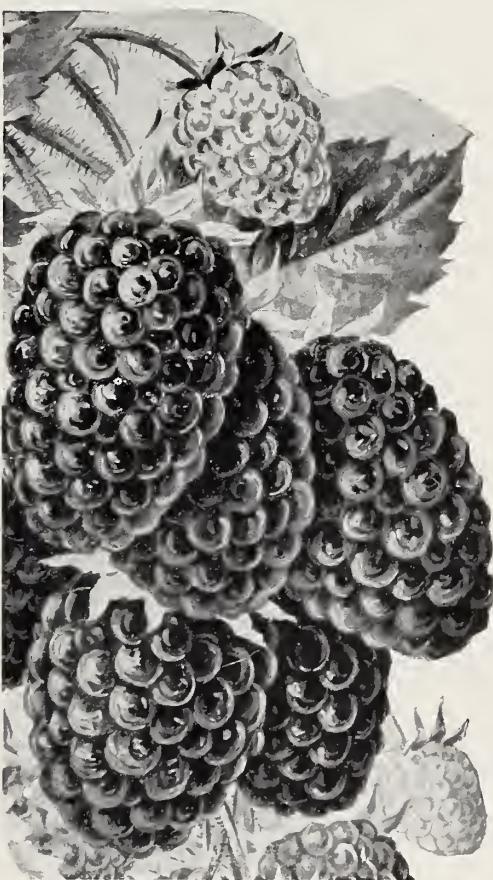
Himalaya Blackberry.

**Erie (New).** Fruit large; of good quality; plant hardy, vigorous and productive. Very early. A promising new variety.

**Himalaya Blackberry.** Imported originally by Luther Burbank. It is a remarkable grower, canes growing 40 feet in a single season; an enormous bearer, and a good shipper; berry round, very few seeds and with almost no core.

**Mersereau.** (New.) This early, mammoth, ironclad Blackberry is by far the most valuable variety that has appeared since the advent of the Wilson, over 30 years ago. Very hardy, notwithstanding low temperatures. The berries are brilliant sparkling black throughout, and what adds great value to it, as a market berry, it remains black under all conditions and circumstances, never turning red when gathered in hot, muggy weather, after the manner of Snyder, Lawton, Erie and many other blight. The yield is simply enormous.

**Rathbun.** A strong, erect grower with strong stem branching freely; will root from tip of branches like a raspberry. Hardy, having endured 20 degrees below zero and produced a good crop. Forms a neat, compact bush 4 to 5 feet high, producing its immense fruit abundantly. Fruit is sweet and luscious, without hard core, of extra high flavor, jet black, small seeds, firm enough to ship and handle well. Very large size, resembling the Wilson and fully equal to that grand variety, with the addition of hardiness.



Mammoth Blackberry.

**Snyder.** Extremely hardy, enormously productive, medium size; no hard sour core; sweet and juicy. The leading variety where hardiness is the consideration. Ripens early.

**Wilson, Jr.** Large, luscious and sweet as soon as colored. Plant hardy; ripens earlier and is said to be more productive than its parent.

### BLACKBERRIES—STANDARD VARIETIES.

**Crandall's Early-Everbearing.** Large and firm.

**Kittatinny.** Large; conical; juicy, sweet, excellent.

**Lawton.** Large; ripens late; very productive.

**Mammoth Blackberry.** Supposed to be a cross between the wild blackberry of California and the Crandall's Early. Deep red; enormously productive and exceedingly early; fruit enormous in size.

### THE LOGANBERRY.

Vine an exceedingly strong grower; trails upon the ground like a dewberry; fruit is often an inch and a quarter long, dark red, with the shape of a blackberry, the color



Loganberry.

of a raspberry, and a combination of the flavors of both; a great acquisition to the berries on the market; a splendid shipper, good dryer and in great demand for canning.

### THE DEWBERRY.

**Lucretia.** One of the low-growing trailing blackberries; in size and quality it equals any of the tall-growing sorts. Perfectly hardy, healthy and remarkably productive, with large, showy flowers. The fruit, which ripens early, is often one and one-half inches long by one inch in diameter; soft, sweet and luscious throughout, with no hard core; ripe before late raspberries are gone. Should be mulched to keep berries from ground. We can highly recommend this variety.

### THE RASPBERRY.

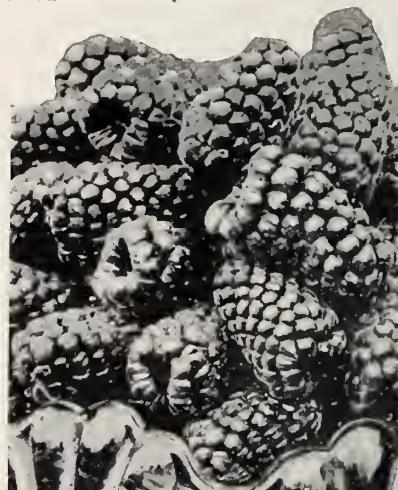
Will do well on any soil that will produce a good corn crop. Land should be thoroughly prepared and well enriched; ground bone is one of the best fertilizers. Keep well cultivated and free from weeds and suckers. As soon as they have done bearing, cut out the old wood to give more vigor to the young canes. Plant in rows five feet apart, three feet apart in rows.

#### BLACK.

**Cumberland.** The largest of all the Blackcaps. A healthy, vigorous grower, throwing up stout, stocky, well branched canes that produce immense crops of magnificent berries. Fruit very large, firm, quality about same as Gregg; keeps and ships as well as any of the blacks. The most profitable market variety. Midseason.

**Cardinal.** (New.) The berries are large, dark red; firm, with an agreeable, pure, rich flavor, which is brought to its highest perfection when canned or cooked in pies. Season rather late. Berry adheres well. Its growth is of the strongest, canes growing 15 to 20 feet, and making from 10 to 15 canes from one hill or plant. Very few thorns. Foliage perfect. Wonderful producer; most hardy.

**Gregg.** For many years the leading standard, best known market sort. Very productive. Large size, firm, meaty berries, covered with heavy bloom.



Dewberry.

**Kansas.** Strong, vigorous grower, standing extremes of drouth and cold and bearing immense crops. Early, ripening just after Palmer. Berries size of Gregg, of better color; jet black and almost free from bloom; firm, of best quality; presents a handsome appearance and brings highest price in market.

**Shaffer's Colossa.** Fruit large, purple, soft, with a sprightly sub-acid flavor.

## RED.

**Cuthbert, or Queen of the Market.** A remarkably strong, hardy variety; stands the northern winter and southern summers equal to any. Berries very large, measuring three inches around, conical, rich crimson, very handsome, and so firm they can be shipped hundreds of miles by rail in good condition; flavor is sweet, rich and luscious. The leading market variety for main crop.



Cuthbert Raspberry.

**Columbian.** Fruit resembles Shaffers, very large, purplish color, rather soft; rich, sprightly flavor, unrivaled for canning, making jam, jell, etc. Bush wonderful for vigor of growth and productiveness, attaining a very large size and producing immense crops.

**Haymaker.** An Ohio seedling of the Shaffer and Columbian type, fruit a little more acid, and is later than either, prolonging the season. An enormous producer, excelling the Columbian. Improbable as this may seem, the Haymaker has for several seasons in different localities under same conditions produced more fruit, and we offer it as the most productive raspberry on earth, equal to Columbian in all other respects.

**Loudon.** The best red midseason berry. Its points of superiority are vigor of growth, large fruit, beautiful rich, dark crimson color, good quality and marvelous productiveness and hardiness, enduring winters without protection and without injury to the very tips. It stands shipping the best of any variety, and will remain on bushes the longest without injury.

**Marlboro.** Large size, light crimson color; good quality and firm. Vigorous and productive. The best, well tested, large early berry for the north.

**Miller Red Raspberry.** A stout, healthy, vigorous grower, not quite as tall as Cuthbert, but rather more stock and dwarfish. It is well calculated to hold up the immense crops of fruits with which it loads itself. Berry is as large as Cuthbert, holding its size to the end of the season; round in shape; color bright red, does not fade, but will hold its color after shipment longer than any other red variety. It does not seem particular as to soil, having been fruitied on light, sandy, gravelly and heavy clay soils with equal success.

## YELLOW.

**Golden Queen.** A beautiful, large golden yellow berry, seedling of the Cuthbert and surpassing that variety in size, beauty, quality and adaptability. Canes hardy, of strongest growth, productive. Should be in every home garden, its beauty and high quality placing it at the head for table use.



Marlboro Raspberry.

## THE CURRANT.

Hardy, easily cultivated, standing neglect well and liberally responding to cultivation and generous treatment; indispensable for table use, jellies, etc.; no garden is complete without them, and large quantities are required for market.

Set four feet apart in rich ground; cultivate well or mulch heavily; prune out old wood so that each remaining shoot will have room to grow. If the currant worm appears, dust with hellebore.

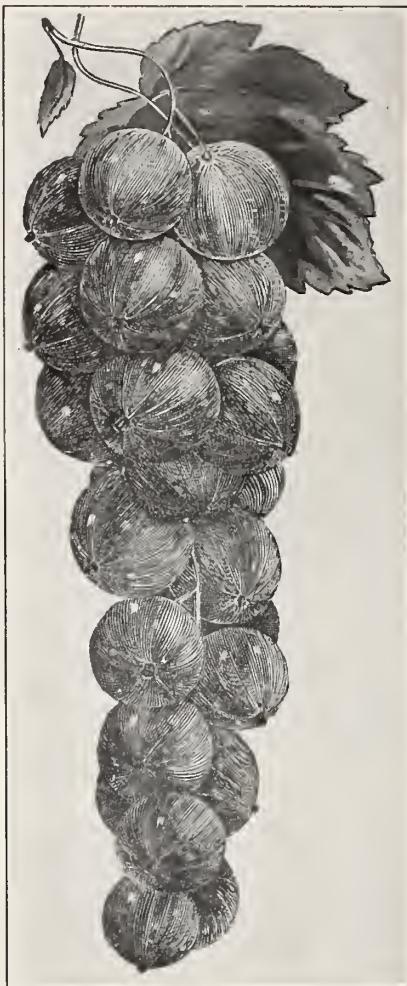
**Black Champion.** Very productive, large bunch and berry, excellent quality, strong grower.

**Black Victoria.** A strong, vigorous grower, making a neat bush of unfailing productiveness; fruit of fine flavor and enormous size. The largest black in cultivation.

**Cherry.** Berries, sometimes more than half an inch in diameter, bunches short, vigorous and productive when grown on good soils and well cultivated.

**Fay's Prolific.** The leading market variety. Extra large stems and berries, uniform in size, easily picked, exceedingly productive. No variety ever made as quick a jump into popular favor, the demand most seasons being in excess of the supply.

**La Versailles.** Very large red; bunch long, of great beauty and excellent quality; one of the finest and best, and should be in every collection.



Fay's Prolific Currant.

**London Market.** For many years this variety has been fruiting in Michigan, where it is now planted extensively and regarded as the best market variety of that great fruit state. Plant is extremely vigorous, with perfect foliage, which it retains through the season; an enormous cropper. Ripens with Victoria, is larger in both bunch and berry, a better bearer. For any use—home garden or market—one of the best.

**Perfection.** Beautiful, bright red, as large or larger than Fay's, holding its size to end of bunch; easy to pick; a great bearer, superior to any other large sort; less acid

and of better quality than any other large currant in cultivation. Large healthy foliage, intermediate in growth between Fay's and White Grape. Kept well cultivated and fertilized they will regularly produce heavy crops of extra size fruit of the very best quality.

**Pomona.** Medium size, clear bright red, excellent quality; hangs long time after ripe; holds up well on market; is one of the best for shipping; easily and cheaply picked. Holds an unparalleled record for actual acreage yield in ordinary field culture.

**Red Dutch.** An old well-known sort, good quality berry, medium, long bunch. Very productive.



Perfection Currant.

**Victoria.** Large, bright red, bunches extremely long; berries medium size, of excellent quality. Good erect grower, very productive. Ripens late, making it one of the most valuable sorts.

**White Grape.** Very large; yellowish white; sweet or very mild acid; excellent quality and valuable for the table. Productive.

**White Imperial.** Vigorous grower, very productive. The sweetest and richest white currant extant. Fruit larger and stems longer than White Grape. The fruit sugar and acid are blended without excess of either. The best of all for a dessert fruit.

**Wilder.** One of the strongest growers and most productive. Bunch and berries very large, bright, attractive red color, even when dead ripe; hangs on bushes in fine condition for handling as late as any known variety. Compared with the celebrated Fay's—is equal in size, with longer bunch, better in quality, with much less acidity, ripens at same time, continues on bush much longer, fully as prolific, in some trials largely outyielding it.

## THE GOOSEBERRY.

The gooseberry wants annual manuring to sustain its vigor. The American varieties need close pruning every year. The English kinds require but little pruning. They may be planted in the fall or spring.

### ENGLISH VARIETIES.

**Industry.** Berries of largest size, excellent flavor, pleasant and rich; dark red color when fully ripe. Strong, upright grower; an immense cropper, less subject to mildew than most of the foreign varieties. The best known and most successful English sort.

**Whitesmith.** Large, roundish, oval, yellowish-white, slightly downy; of first quality.

### AMERICAN VARIETIES.

**Columbus.** This is one of the most valuable introductions of recent years in small fruits, and it fully sustains the high opinion first formed of it. It was introduced by Elwanger & Barry. The fruit is of largest size, handsome, of a greenish-yellow color, and the quality is excellent. The plant is vigorous and productive, and does not mildew. It merits a place in every garden. The editor of the Rural New Yorker says: "It is the best variety yet introduced, and seems close to a perfect Gooseberry for our climate."

**Downing.** Seedling of Houghton. Fruit large, two or three times the size of Houghton; whitish-green; flesh soft, juicy, good; plant vigorous and prolific; excellent for family use and very profitable for market.

**Josselyn.** (Red Jacket.) An American seedling of large size, smooth, prolific and hardy, of best quality. Has been well tested over a wide extent of territory by the side of all the leading varieties, and so far the freest from mildew, both in leaf and fruit, of them all. A wonderful cropper, with bright, clean, healthy foliage.



Downing Gooseberry.

**Poor Man's Gooseberry.** Berries about size of Downing; quality much better; red when fully ripe; prolific bearer; hardy, and absolutely free from mildew. Good shipper and canner.

## ESCULENT ROOTS

### ASPARAGUS.

**Columbian Mammoth White.** A distinct variety of strong, vigorous growth, producing very large, white shoots, that in favorable weather remain white until three or four inches high, or as long as fit for use. Market gardeners and those growing for canners will find this a very profitable variety.

**Conover's Colossal.** A standard variety of large size, tender and excellent quality.

**Palmetto.** A very early variety; even, regular size, of excellent quality.

### RHUBARB—PIE PLANT.

**Linnaeus.** Large, early, tender and fine. The very best of all.

**Queen.** Strong, vigorous grower, producing extra large stalks of finest quality, of a decided pink color. For canning or cooking in any way its quality is unsurpassed.

**Australian Crimson Winter.** Stalks medium size, greenish-crimson color turning to light clear crimson when cooked, of the very best quality. The earliest of all, and if kept moist will produce good stalks at any season the weather will permit; in warm climates is a true perpetual.



Palmetto Asparagus.

# FOREST TREES AND SHRUBS

In our semi-arid region, where tree growth is at best a limited proposition, nothing gives so much an air of prosperity and comfort to the home and orchard as a few forest trees for shade and beauty. Indeed, when aligning the country road, the city street, or given a conspicuous place on the home ground, trees give an individuality to the landscape that nothing else will. Beyond these considerations, shade trees sur-



Catalpa Speciosa.

rounding ranch and orchard, possess an economic value as windbreaks and for dust protection from traveled roads. Appreciating this, we have always aimed to grow a line of forest trees peculiarly adapted to the climatic and soil conditions of the inter-mountain region, chiefly of the deciduous varieties. In planting, take the same precaution as for fruit trees. While the plants are young, and until they become well established, an occasional irrigation and a stirring of the soil at the base of the tree, will repay the planter in added growth and development. Pruning is a matter of local conditions. Along sidewalks high pruning is, of course, called for, but as specimen plants around the home or on the lawn, pruning should be done sparingly.

## DECIDUOUS.

### ASH—*FRAXINUS EXCELSIOR*.

**European Ash.** A large-growing, curious variety; irregular habit, spreading head and gray bark.

### ELDER—*SAMBUCUS*.

**Box Elder.** An esteemed native tree. Fine form and peculiar foliage. Vigorous and hardy.



Norway Maple.

### CHESTNUT—*CASTANEA*.

**American Chestnut.** A magnificent forest tree, with deep, rich foliage, and well-known fruit; is exceedingly valuable as a timber tree.

### CATALPA.

**Catalpa Speciosa.** (Western Catalpa). A variety originating in the West; more upright and symmetrical than the common Catalpa (*Syringafolia*), and blossoms two or three weeks earlier. Very valuable for timber, fence posts, railroad ties, etc., possessing wonderful durability. A very ornamental and valuable tree.

### ELM—*ULMUS*.

**Huntington.** Of very erect habit and rapid, vigorous growth. Bark clear and smooth; one of the finest elms for any purpose.

**American White, or Weeping.** The noble, graceful, spreading and drooping tree of our own forests.

#### HORSE CHESTNUT—*AESCRULUS*.

**White Flowering.** The well-known species; decidedly ornamental; makes a dense, symmetrical head; blooms in May, with large clusters of white flowers, mottled with red; makes the most popular shade tree; very healthy and hardy.

#### MAPLE—*ACER*.

**Norway.** (*Platanoides*). One of the most beautiful and desirable trees known; of large size, perfect outline; deep green foliage; compact in form and free from insects and disease.



Carolina Poplar.

**Wier's Cut-Leaved.** A variety of the silver leaved. A rapid-growing tree with slender branches and very pretty indented leaves, silvery on the under side. Very graceful and attractive. One of the best lawn trees.

#### MOUNTAIN ASH—*SORBUS*.

**European.** A very fine, hardy, ornamental tree, universally esteemed; profusely covered with large clusters of red and scarlet berries.

**Oak-Leaved.** A hardy tree of fine pyramidal habit. Height and breadth from 20 to 30 feet. Foliage simple and deeply lobed; bright green above, downy beneath. One of the finest lawn trees.

#### POPLAR—*POPULUS*.

**Bolleana.** A very compact, upright grower, resembling the Lombardy Poplar, with leaves glossy green above, and silvery beneath; bark blue-green and smooth.

**Lombardy.** Its tall, fastigate form, sometimes reaching 120 feet, makes it indispensable in landscape effects for breaking monotony of outline. Its growth is very rapid.

**Carolina.** Pyramidal in form and robust in growth; leaves large, serrated, pale to deep green; one of the best.

#### SYCAMORE—*PLATANUS*.

**American.** (Buttonwood). Large, well-formed, fast growing tree, bearing a profusion of curiously pendant balls; excellent shade and street tree.

#### THORN—*CRAEAGUS*.

**Flora Albo Pleno.** Double white.

**Double Red.** Flowers bright red, double and very fine.

The above varieties of the Thorn are all very showy, highly ornamental, hardy, small trees and very fragrant flowers.

#### WALNUT—*JUGLANS*.

**Black.** A very ornamental tree of a spreading habit, with a round head; desirable for its fruit.

**European.** A large tree. Is much cultivated in Europe, both for its fruit and for its timber.

#### WEPPING DECIDUOUS.

The following class of weeping trees are highly interesting and ornamental for grounds, lawns, cemeteries, etc., by reason of their graceful appearance.

#### ASH—*FRAXINUS*.

**European Weeping.** One of the finest weeping trees for lawns and arbors.

#### BIRCH—*BETULA*.

**Cut-Leaved Weeping.** Beyond question one of the most popular of all weeping or pendulous trees. Its tall, slender, yet vigorous growth; graceful, drooping branches, silvery white bark, and delicately cut foliage present a combination of attractive characteristics rarely met in a single tree.

#### ELM—*ULMUS*.

**Camperdown.** Grafted six to eight feet high, forms one of the most picturesque drooping trees; it is of rank growth, often growing several feet in a single season. The leaves are large, dark green and glossy, and cover the tree with a luxuriant mass of verdure.

#### MOUNTAIN ASH—*SORBUS*.

**Weeping.** A beautiful variety of rapid growth and decidedly pendulous and trailing habit; one of the most desirable lawn trees.

#### WILLOW—*SALIX*.

**Weeping.** (*Babylonica*). The common Weeping Willow.

**New American Weeping.** (*Purpurea pendula*). An American species of dwarfish habit, with slender, drooping branches, and when grafted six to seven feet high forms a beautiful and graceful tree.

**Kilmarnock.** A very graceful weeping tree, with brown branches, glossy leaves, and a symmetrical, umbrella-shaped head. Thriving in any soil or situation, it is one of the most desirable of the weeping trees.

## DECIDUOUS SHRUBS.

### ALTHEA FRUTEX—HIBISCUS SYRIACUS.

This is a very desirable class of shrubs, blooming in the autumn months, when few other shrubs are in flower, and of the easiest cultivation, being very hardy.



Flowering Dogwood.

**Lady Stanley.** (*Speciosa*). Variegated red and white flowers; new. Very fine.

### FLOWERING CRAB—PYRUS.

**Bechtel's.** Makes a magnificent sized tree; perfectly hardy, succeeds well in all soils not extremely wet. When in bloom appears to be covered with delicate pink, perfectly double small roses of delicious fragrance. The only sweet-scented Double Crab.

### ALMOND—PRUNUS.

**Dwarf Double Rose Flowering.** (*Japonica flore rubra pleno*). A beautiful shrub, with small double rosy blossoms.

**Dwarf Double White Flowering.** (*Japonica flore alba pleno*).

### SWEET-SCENTED SHRUB—CALTHA—CANTHUS.

**Floridus.** An interesting shrub, having a rare and peculiar fragrance of wood and flowers; its blooms are abundant and chocolate color.

### DOGWOOD—CORNUS.

**Elegantissimi.** A new and remarkable variety, with dark green foliage, margined with silver and red; wood a very dark red, retaining its color the entire year. A very beautiful and attractive shrub for lawns and group planting; a strong grower and perfectly hardy in all soils and climates.

**Red Branched.** (*Sanguinea*). Very conspicuous and ornamental in winter from its red bark.

### DEUTZIAS.

Small flowered shrubs noted for their freedom of bloom and rapid growth. Through their blooming season entire limbs are thickly studded with flowers.

**Candidissima.** Strong growing variety with pure white double flowers.

**Crenata.** Quite distinct from all others. Remarkably free bloomer. Flowers pure white.

**Crenata.** (*Flore plena*). Double white tinged with pink. One of the most showy shrubs.

**Gracilis.** (*Slender Branched*). A desirable dwarf growing variety. Valuable for garden or winter blooming in pots. Thousands forced by florists each winter.

**Parviflora.** Creamy white flowers arranged prettily in corymbs. Stems strong and upright. One of the most beautiful of all the Deutzias.

**Wateri.** Probably the most popular of all Deutzias. Flowers pure white, extra large and flower spikes especially long.



Hydrangea Otaksa.

### FRINGE TREE—CHIONANTHUS.

**Purple Fringe.** A very much admired shrub for its singular fringe or hair-like flowers, covering the whole plant; known as Aaron's Beard.

**White Fringe.** A small tree or shrub, with graceful, drooping clusters of fringe-like white flowers.

### HYDRANGEA.

**Otaksa.** New, from Japan. Corymbs of flowers of very large size, deep rose color; foliage larger than other varieties of the species. Growth vigorous, very attractive.

**Paniculata Grandiflora.** A fine, large shrub, bearing showy panicles of pink and white flowers in the greatest profusion. It is hardy, and is altogether a most admirable shrub for planting singly, or on the lawn in masses.

**Thomas Hogg.** Flowers pure white, often measuring fifteen inches in diameter. It is hardy everywhere, if a slight protection of leaves is given around the roots in winter.

#### BUSH HONEYSUCKLE—*LONICERA*.

**White Tartarian.** Forms an upright bush with white flowers and fruit.

**Pink Flowering.** A beautiful shrub, producing large, bright red flowers striped with white; in June; superseding the old red.

#### LILAC—*SYRINGA*.

**Common Purple.** Bluish purple flowers.

**Common White.** Cream-colored flowers.



Spiraea Callosa Alba.

#### QUINCE—*CYDONIA*.

**Scarlet Japan.** A very hardy shrub, with double, scarlet crimson flowers in great profusion early in spring; highly ornamental.

**Blush Japan.** A very pretty variety, with delicate white flowers tinged with blush.

#### SPIRAEA.

**Billardi.** Blooms nearly all summer; rose colored; fine; showy.

**Callosa alba.** A new white flowering Spiraea, of dwarf habit; very fine, perfectly hardy; blooms in July and August; one of the most desirable.

**Golden Leaved.** (*Opulifolia*). An interesting variety, with golden yellow tinted foliage, and double white flowers in June. Very conspicuous. Strong grower and distinct.

**Lance Leaved.** (*Lanceolata*, or *Reevesii*). A charming shrub, with round heads of white flowers and narrow, pointed leaves. Blossoms in May.

#### MOCK ORANGE—*PHILADELPHUS*.

**Aurea.** A new gold leaf shrub of delicate growth and beauty. It is not so fine a flower as the Mock Orange, but is sufficiently free to make it very valuable for clumps and hedges.

**Garland.** (*Coronarius*). A very fine shrub, with sweet scented flowers.

**Double Flowering.** Habit of growth stronger than the above, with semi-double white flowers.

**Large Flowered.** A vigorous grower; very showy; large white flowers, slightly fragrant.



Mock Orange.

#### SNOWBALL—*VIBURNUM*.

A well-known, favorite shrub, of large size, with globular clusters of pure white flowers. The latter part of May.

#### WEIGELA—*DIERVILLA*.

**Rosea.** (Rose-colored Weigela). A beautiful and hardy shrub, with double, rose-colored flowers, rich in profusion; introduced from China by Mr. Fortune; very hardy; blooms in June.

**Candida.** All white varieties heretofore known have been lacking some important characteristics. *Hortensis nivea*, the best and only really white sort, is a poor grower and difficult to propagate; other so-called white sorts have flesh-colored flowers, so that the introduction of the *Candida* supplies a long-felt want. It is of vigorous habit, an erect grower, becoming in time a large-sized shrub; flowers pure white and produced in great profusion in June, and the plants continue to bloom during the summer, even until autumn.

## CLIMBING AND TRAILING PLANTS

In a country where the hot sun is more or less a feature, climbing and trailing plants certainly find a place and add to the comforts of life. For trailing up over piazzas, porishes, etc., for screening unsightly objects from view; for trailing over rockeries, outhouses, fences, etc., a selection of these plants add much to the beauty of the home and grounds.



Clematis Jackmanii. (Page 43.)

### AMPLEOPSIS.

**Ampelopsis quinquefolia.** (American Ivy, or Virginia Creeper). Has beautiful and digitate leaves that become rich crimson in autumn; a very rapid grower; like the ivy, it throws out tendrils and roots at the points, by which it fastens itself to anything it touches; one of the finest vines for covering walls, verandas or trunks of trees; affords shade quickly.

**Miss Bateman.** One of the most charming of the spring flowering hybrids, having large, fragrant white flowers, with chocolate red anthers. May and June.

### HONEYSUCKLE—LONICERA.

**Hall's Japan.** (Halliana). An evergreen variety, with pure white flowers, changing to yellow, very fragrant; blooms from June to November. Holds its leaves till January. The best of all.

**Monthly Fragrant.** (Belgica). Sweet-scented; very fine; continues to bloom all summer.

**Scarlet Trumpet Monthly.** (Sempervirens). Strong; rapid grower; blooms all summer.

### IVY—HEDERA.

**English.** An old variety; a hardy climbing plant.



Hall's Japan Honeysuckle.

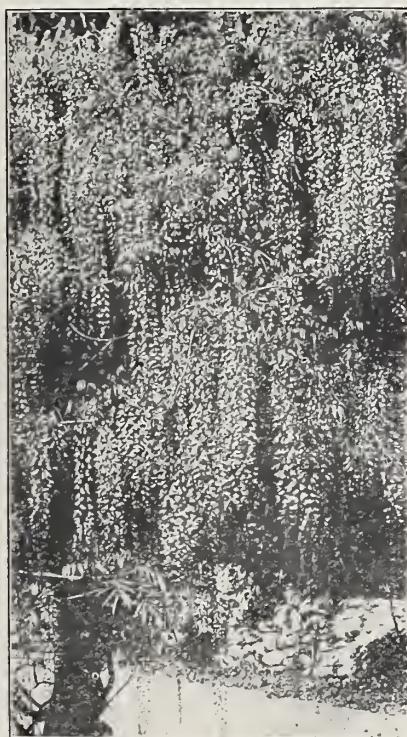
**Ampelopsis Veitchii.** (Japan Creeper). Leaves smaller than those of the American and overlap one another, forming a dense sheet of green. The plant is a little tender while young and requires protection the first winter; but once established, there is no further risk. It grows rapidly, and clings to wall or fence with the tenacity of ivy; the foliage is very handsome in summer and changes to crimson scarlet in autumn; for covering of walls, stumps of trees, rockeries, etc., no plant is so useful. For the ornamentation of brick and stone structures it can be specially recommended.

**CLEMATIS.**

Summer and autumn bloomers, flowering on wood of the same season's growth.

**Henryi.** A strong grower and a free bloomer; the flowers are creamy white.

**Jackmanii.** This is perhaps the best known of the newer fine perpetual Clematis, and should have credit for much of the great popularity now attending this family of beautiful climbers. The plant is free in growth and an abundant and successful bloomer, producing flowers until zero weather. The flowers are large, of an intense violet purple, remarkable for their velvety richness. Though introduced in 1862, since which time many new varieties have been propagated, the Jackmanii has no superior and but few equals. July to October.



Chinese Wistaria.

**Madam Edouard Andre.** A new French variety, entirely distinct and novel. The nearest approach to a bright red yet produced. This Clematis was exhibited at the World's Fair, Chicago, in the French department, and attracted great attention, owing to the brilliancy of its flowers. The plant is a strong, vigorous grower, being a hybrid of the popular Jackmanii variety, which it resembles in freedom of bloom, vigorous growth, shape and size of flowers.

**Paniculata.** A great novelty from Japan. It has proved to be one of the most desirable, useful and beautiful of hardy garden vines, being a luxuriant grower, profuse bloomer, and possessing fine foliage. It is particularly useful for covering verandas, pillars and fences, or where a trellis or support can be provided for it to climb on. The flowers are of medium size, very pretty and fragrant, and produced in the greatest profusion in late summer. We can recommend this novelty in the strongest manner as one of the best vines to grow near the house; it makes a growth of from 25 to 30 feet in a single season, and should be cut back to the ground each spring.

**Virginiana.** A very strong grower, having fragrant white flowers.

**WISTARIA.**

**Chinese Purple.** One of the most splendid, rapid growing plants; has long pendant clusters of purple flowers in spring and autumn.

**Chinese White.** Similar to the above, except in color of the flowers, which is pure white.



Privet as a Hedge Plant.

**THE HEDGE PLANTS.**

**The Boxwoods.** These very ornamental shrubs of dense, but rather slow growth, with shining foliage are invaluable for grouping, lawn decoration and for hedge purposes. For tub culture and for formal decorative work they are more extensively grown than any other class of plants.

**Privet.** The handsomest and most satisfactory of all hedge plants; can be pruned into any shape; perfectly hardy.

**Purple-Leaved Barberry.** A very pretty shrub, with purple foliage; fruit is acid, and is highly esteemed for preserving; very effective in groups or masses, or planted by itself.



## THE EVER POPULAR ROSE

No one flower is so widely cultivated and affords greater pleasure for beauty of bud and flower than the rose. Easily at home in both the colder and warmer regions, and luxuriating under varying conditions of soils and climates, it is alike popular in the conservatory, on the lawn, in the flower garden, and as a cut flower for indoor decoration. Our assortment contains those varieties that find congenial conditions in the intermountain region, where our roses have proven satisfactory alike to rosarians and the lover of general garden effects. Our plants are all well-grown, hardy, good growers and free bloomers, while the varieties enumerated are well adapted to prevailing climatic conditions in this region. In planting roses it is well to remember that the teas are best on light soils, the hybrid perpetuals on heavy, and the hybrid teas on medium. The rose delights in an open, airy situation. When planting dig up the soil thoroughly for a depth of about 12 inches, enriching with well-rotted barnyard manure. When planted press the soil over the roots and water freely. Most roses do best moderately pruned; all weak and decayed wood should be removed.

### HYBRID PERPETUALS.

This class of roses is the most desirable on account of their free blooming, and are particularly adapted for cold climates, because they are entirely hardy, though slight protection in winter in exposed situations is always desirable. This may be done by hilling up the earth, or better, by strewing leaves or straw lightly over the plants and securing them with evergreen branches or brush of any kind. Pruning should be done in March or early in April. Remove two-thirds of the past year's growth. All weak and decayed wood should be entirely cut out. Hybrid Perpetuals and Moss Roses may be planted in spring or fall.

**Alfred Colomb.** Cherry red, passing to bright rich crimson; flowers extra large, double and full; extremely fragrant, and in every respect a superb sort; one of the very finest Hybrid Perpetual Roses.

**American Beauty.** This is perhaps the grandest and most popular rose now known. It is a genuine Hardy Ever-Blooming Rose. It stands without any equal in immense size, rich color, perfect form and delightful fragrance. The color is a rich rosy crimson, shaded most beautifully.

**Anna de Diesbach.** Brilliant crimson, sometimes shaded with bright maroon. A superb garden sort; fragrant; one of the hardiest and best.

**Coquette des Alps.** Large, full, finely formed flower; color, white, sometimes faintly tinged with pale blush; profuse bloomer.

**Coquette des Blanches.** Of fine form, pure white, with beautiful, shell-shaped petals. Especially suitable for cemetery planting.

**Clio.** A fine, flesh-colored hybrid perpetual. The flowers are perfect in form, with fine, broad petals, and are beautiful at all stages, from the small bud to the full open flower; color delicate satin blush, with a light shading of rosy pink.



Jubilee Rose.

**Captain Christy.** A delicate flesh color, rosy center; flowers large, double and sweetly scented.

**Gen. Jacqueminot.** Brilliant crimson; not full, but large and extremely effective; very fragrant and of excellent, hardy habit; magnificent buds.

**Gloire Lyonnaise.** White, tinted with yellow; large, full and of splendid shape. The nearest approach to a yellow rose of this class.

**Gruss an Teplitz.** One of the brightest colored roses grown. When first opened it is dark rich crimson, quickly changing to bright scarlet shading to velvety fiery red. Blooms continually; flowers good sized and delightfully fragrant. Plant vigorous and upright grower, making fine pot plants.

**Hermosa.** Everybody knows the beauty and constancy of this old favorite. Pink, very fragrant. A grand rose for bedding or pot culture.

**Jubilee.** New. A splendid large-flowered variety of intense coloring, fiery maroon crimson, often almost black.

**Jules Margottin.** Bright cherry red; large, well formed, fragrant flowers; very double and free; a splendid variety.

**La France.** Delicate, silvery rose, changing to a silvery pink; very large, full of fine globular form; a most constant bloomer; very sweet and cannot be surpassed in delicacy of coloring.



Captain Christy Rose.

**Marshal P. Wilder.** Color cherry carmine, richly shaded with maroon; very fragrant and a free bloomer; a vigorous grower and hardy; continues to bloom long after other Hybrid Perpetuals are out of bloom; a superb rose and should be in every collection.

**Madame Plantier.** Pure white, medium size, full; produced in great abundance early in the season; one of the best white roses; hardy; suitable for cemetery planting or massing in groups.



La France Rose.

**Paul Neyron.** Deep rose color; good, tough foliage; by far the largest variety in cultivation; a free bloomer, very double and full; finely scented.

**Ulrich Brunner.** Bright cerise red; flowers large, and of fine globular shape.



Ulrich Brunner Rose.

#### MOSS ROSES.

**Aetna.** One of the finest; very large and full, delightfully fragrant, color bright crimson, shaded with purple; very mossy.

**Princess Adelaide.** Fine, strong grower; hardy; flowers bright rosy pink; large, very double.

**Perpetual White Moss.** One of the most mossy varieties, prettiest in bud; flowers of medium size, and borne in large clusters; fragrant; color pure white.

#### CLIMBING ROSES.

Climbing roses are highly valued for training over arbors, trellises and verandas; also as screens for unsightly objects. They grow ten to twelve feet high, and are entirely hardy. They bloom the second year, and but once during the season, but are prolific bloomers.

**Baby Rambler.** Forms compact bushes about two feet high, covered with clusters of rich, crimson-red pink-like flowers throughout the season. Perfect hardy. The size of the clusters and the number of flowers in each are the marvel of all beholders.



Paul Neyron Rose. (Page 45.)

**Baltimore Belle.** Pale blush, variegated carmine, rose and white; very double; flowers in beautiful clusters; the whole plant appearing a perfect mass of bloom; one of the very best climbing roses.



Moss Rose.

**Prairie Queen.** Clear, bright pink, sometimes with a white stripe; large, compact and globular; very double and full; blooms in clusters.

**Crimson Rambler.** (Japanese). This wonderful rose has been thoroughly tried in all situations and has proved to be all that could be claimed for a new introduction, and it has far surpassed all that was hoped for it. As a climbing or running rose it has no equal. The foliage is rich, dark green, the growth rapid and diverse, but its greatest beauty is when the plant is covered with a profusion of the brightest crimson, partly double flowers, which remain a long time.



Dorothy Perkins Rose.

**Dorothy Perkins.** A splendid climbing rose; the foliage and habit of growth resembling Crimson Rambler; the flowers are very double, of good size and are borne in clusters of from ten to twenty. The petals are very prettily rolled back and crinkled; the color is clear shell-pink and holds a long time without fading; very sweetly scented.

**Gem of the Prairie.** A hybrid between the Queen of the Prairie and Madam Lafay. It is a strong and vigorous grower, similar in habit to the Queen, but the flowers are considerably darker in color, besides being quite fragrant. New and a great acquisition.

**Russell's Cottage.** Dark velvety crimson; very double and full; a profuse bloomer.

**Yellow Rambler.** A new hardy climbing rose of the class and habit of the famous Crimson Rambler; flowers medium size, cup shape, nearly full, sweet scented; blooms in large clusters which last three or four weeks; color golden yellow, a color heretofore unknown in a hardy climbing rose.



Cactus Dahlia.

#### HARDY YELLOW ROSES.

**Harrison's Yellow.** Golden yellow, medium size, semi-double; free bloomer.

**Persian Yellow.** Bright yellow, small, nearly full.

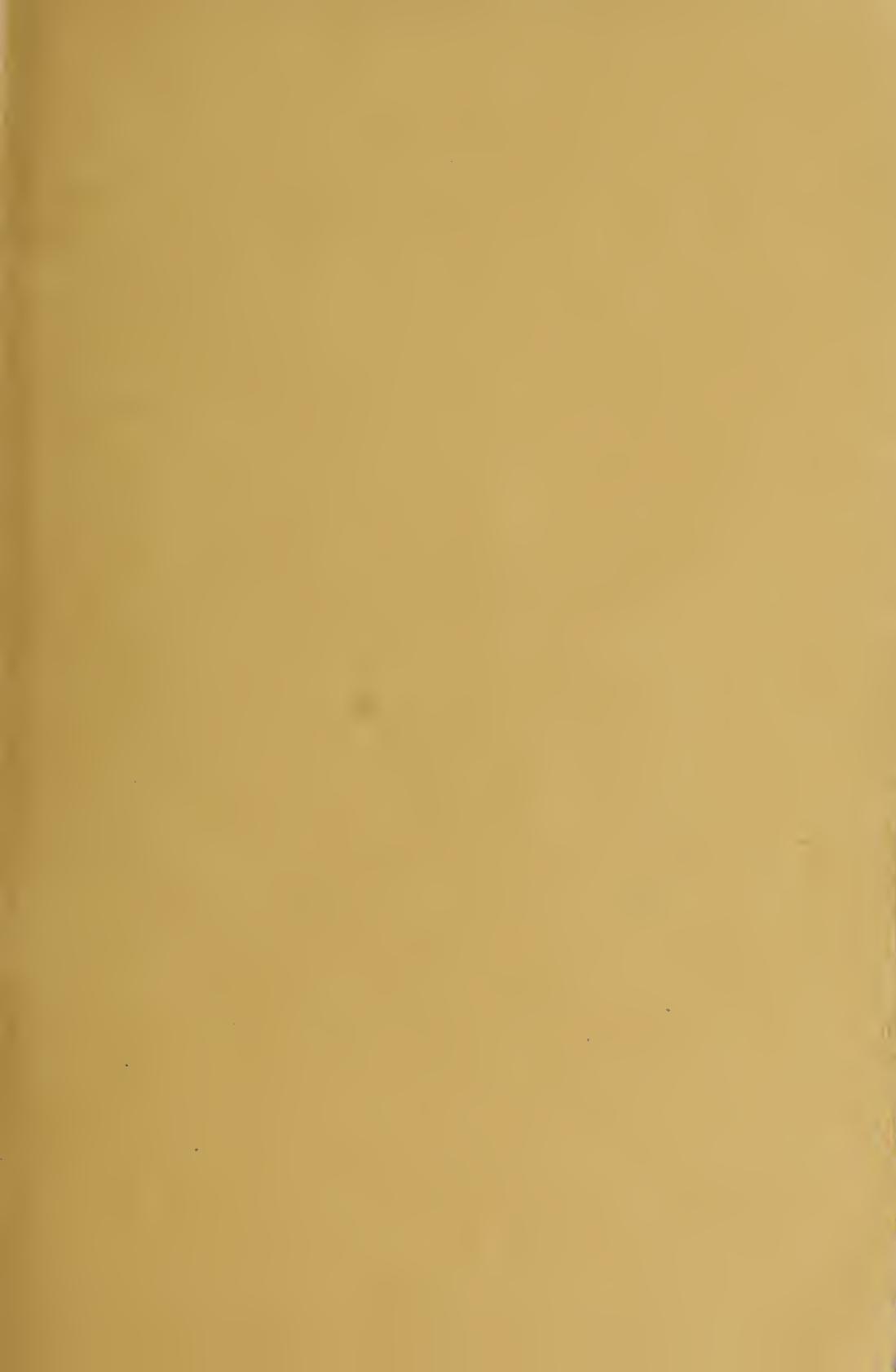
### THE DAHLIA.

No garden is complete without a show of these brilliant and stately autumn flowers, and nothing gives greater return for so little money and care. We offer dry bulbs or tubers, but if stock of these becomes exhausted will send started plants.



# TOPICAL INDEX

<b>FACTS ABOUT OUR BUSINESS.</b>		<b>Page</b>	<b>Page</b>	
Nurseries and Location.....	3	Apricot, The .....	29	
Shipping Facilities .....	3	Varieties .....	29	
Irrigated Trees .....	3	Nectarine, The .....	29	
Transplanting Trees .....	4	Varieties .....	29	
<b>TREES WITH ROBUST ROOTS.</b>			<b>Quince, The.</b> .....	29
Growing Good Tops .....	5	Varieties .....	29	
Money in Fruit Growing....	5	Almond, The .....	29	
Planting Good Trees.....	7	Varieties .....	29	
Choosing Varieties .....	8	Walnut, The .....	29	
Advantages of Dormant Trees .....	9	Varieties .....	29	
<b>IMPORTANT THINGS TO OBSERVE.</b>			<b>TABLE, RAISIN AND WINE GRAPES.</b>	
How to Order.....	10	Cultural Note .....	30	
Guarantee of Genuineness..	10	American Table Grapes .....	30	
Replacing .....	10	Foreign Table, Raisin and Wine Grapes .....	31	
<b>WHEN TO PLANT AND HOW.</b>			Foreign Wine Grapes .....	32
Time to Plant.....	11	<b>THE SMALL FRUITS.</b>		
Selecting Nursery Stock....	11	Cultural Note .....	33	
Number of Plants to an Acre .....	11	Blackberry, The .....	33	
Treatment of Trees When Received .....	11	Varieties .....	33	
Preparing Trees for Planting .....	12	Loganberry, The .....	34	
How to Plant.....	12	Dewberry, The.....	34	
Square and Equilateral Methods .....	13	Raspberry, The .....	34	
Bringing Into Bearing.....	13	Varieties .....	34	
<b>THE ORCHARD FRUITS.</b>			Currant, The .....	35
Apple, The .....	15	Varieties .....	35	
Cultural .....	15	Gooseberry, The .....	37	
Thinning the Fruit.....	15	Varieties .....	37	
Summer Apples .....	16	<b>ESCULENT ROOTS.</b>		
Autumn Apples .....	16	Asparagus .....	37	
Winter Apples .....	16	Rhubarb or Pie Plant .....	37	
Crab Apples .....	19	<b>FOREST TREES AND SHRUBS.</b>		
Pear, The .....	20	Introductory Note .....	38	
Cultural .....	20	Deciduous Trees .....	38	
General Collection .....	20	Ash— <i>Fraxinus Excelsior</i> .....	38	
Cherry, The .....	21	Elder— <i>Sambucus</i> .....	38	
Cultural .....	21	Chestnut— <i>Castanea</i> .....	38	
Heart Cherries .....	22	Catalpa .....	38	
Bigarreau Cherries .....	22	Elm— <i>Ulmus</i> .....	38	
Duke and Morello Cherries .....	23	Horse Chestnut— <i>Aesculus</i> .....	39	
Plum, The .....	24	Maple— <i>Acer</i> .....	39	
Cultural .....	24	Mountain Ash— <i>Sorbus</i> .....	39	
General Collection .....	24	Poplar— <i>Populus</i> .....	39	
Prune, The .....	25	Sycamore— <i>Platanus</i> .....	39	
Difference Between Prunes and Plums.....	25	Thorn— <i>Crateagus</i> .....	39	
Varieties .....	25	Walnut— <i>Juglans</i> .....	39	
Peach, The .....	26	Weeping Deciduous .....	39	
Pruning the Trees .....	26	Ash— <i>Fraxinus</i> .....	39	
Varieties .....	27	Birch— <i>Betula</i> .....	39	





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